VOLUME 1

DRAFT ENVIRONMENTAL IMPACT REPORT

CRYSTAL GEYSER ROXANE CABIN BAR RANCH WATER BOTTLING FACILITY PROJECT

INYO COUNTY, CALIFORNIA

SCH No. 2011091055

GENERAL PLAN AMENDMENT No. 2010-01

ZONE RECLASSIFICATION No. 2010-02

CONDITIONAL USE PERMIT No. 2010-03

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Prepared For:
INYO COUNTY PLANNING DEPARTMENT
168 North Edwards Street
Independence, California 93526

Prepared By:
PCR SERVICES CORPORATION
80 South Lake Avenue, Suite 570
Pasadena, California 91101

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EXECUTIVE SUMMARY

This Draft Environmental Impact Report ("Draft EIR") has been prepared pursuant to the requirements of the California Environmental Quality Act ("CEQA") for the Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project (the "proposed project"). In accordance with CEQA Guidelines Section 15123, this Chapter of the Draft EIR provides a brief description of the proposed project; identification of significant effects and proposed mitigation measures or alternatives that would reduce or avoid those effects; areas of controversy known to the lead agency; and issues to be resolved.

1. PROJECT LOCATION

Cabin Bar Ranch, on which the project site would be located, is made up of 20 contiguous parcels and one non-contiguous parcel totaling approximately 420 acres adjacent to US 395, immediately south of the unincorporated town of Cartago, Inyo County, California. Approximately 34.41 acres of the 420-acre ranch property constitutes the proposed project site. Of the 34.41-acre project site, approximately 14.59 acres would be subject to ground disturbance and improvements associated with development of the proposed project. The remainder of the project site (19.82 acres) would not be developed.

2. PROPOSED PROJECT

The proposed project would develop a spring water bottling facility and ancillary uses to be built in three phases over an approximate 10 to 15 year time period. The water bottling facility would include an approximately 198,500-square-foot bottling plant facility with four bottling lines and an approximately 40,000-square-foot storage warehouse. Proposed ancillary uses include rooftop solar array, a fire suppression building, a stormwater detention basin, a leach mound, a fire access road, and a parking and truck staging area. To provide adequate access from US 395 to the bottling facility, the project would remove the site's existing access road (i.e., Cabin Bar Ranch Road) and construct a new permanent access road approximately 2,500 feet to the south. The bottling facility would utilize spring water from three existing production wells to supply the bottling operations. The proposed project would also use a fourth existing well to provide domestic potable water to the water bottling facility's employees.

3. CEQA BACKGROUND

a. Purpose of the EIR

CEQA requires that an environmental review be conducted for activities and approvals that involve discretionary actions. CEQA applies to all California government agencies at all levels, including local agencies; regional agencies; and state agencies, boards and commissions. An Environmental Impact Report (EIR) is an informational document required by CEQA when substantial evidence exists that a project may have a significant physical environmental effect. The EIR is intended to provide information to decision makers, agency staff, and the public about (1) the potential environmental impacts of a project, (2) ways in which the significant effects of a project might be minimized or avoided, and (3) alternatives to the project that could reduce or avoid the significant impacts associated with the project.

CEQA applies to projects for which a governmental agency can use its judgment or discretion in deciding whether to carry out or approve the project. The public agency that has the principal responsibility for carrying out or approving the project is termed the "Lead Agency." For the purpose of this EIR, the Inyo County Planning Department is the Lead Agency. This EIR will also be used by other agencies in their decision-making processes. Responsible Agencies include any public agencies, other than the Lead Agency, that have discretionary approval power over a project. Trustee Agencies are those state agencies that have jurisdiction by law over natural resources held in trust for the people of the State of California. Additionally, Reviewing Agencies includes those agencies that do not have discretionary power over the project but that are expected to review the EIR for adequacy and accuracy.

b. The Environmental Review Process

The initial steps of the environmental review process are to determine whether CEQA applies to a proposed action and whether an EIR is required. For the proposed Project, the Inyo County Planning Department determined that CEQA did apply and, after review of the proposed Project description, which indicated the possibility of significant environmental impacts, the preparation of an EIR was determined to be necessary.

As a first step of the EIR process, the Lead Agency distributes a Notice of Preparation (NOP). The NOP is intended to solicit input from responsible agencies and other interested parties. The Inyo County Planning Department circulated an NOP for the proposed Project on September 20, 2011, beginning a 30-day review period, which ended October 20, 2011. A Public Scoping Meeting was held on September 29, 2011, at the Olancha School, located at 123 School Road, in Olancha. Written comments were received from agencies and from interested individuals and community groups in response to the NOP and Public Scoping Meeting. Copies of the Notice of Preparation, Initial Study, and public comments received during the Public Scoping Meeting and on the NOP and Initial Study are provided in **Appendix A**.

4. SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL IMPACTS

Significant unavoidable impacts can occur as a result of project impacts, cumulative impacts, and as a secondary effect from the implementation of a mitigation measure. Based on the analysis contained in Chapter 4, Environmental Impact Analysis, and Chapter 6, Other Environmental Considerations, the proposed Project would not result in any significant and unavoidable environmental impacts.

5. AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

Potential areas of controversy and issues to be resolved by Inyo County's decision-makers may include those environmental issue topics where the potential for a significant impact has been identified, either through construction or operation of the proposed project. These environmental topics include aesthetic resources, air quality, biological resources, cultural resources, greenhouse gas emissions, hydrology and water quality, land use and planning, noise, and transportation and traffic. NOP comment letters particularly focused on potential impacts to water quality and the cumulative effects of the proposed project upon domestic water supply wells in the community of Cartago. Other issues known to be of concern in the community include the preservation of biological and cultural resources. NOP comments also addressed issues regarding the effects of potential increased lighting, traffic and noise in the area. Supportive NOP comments were submitted citing the fact that the project would create needed jobs in the local community.

6. ALTERNATIVES

The alternatives analyzed include the mandatory No Project Alternative, a Reduced Operations Alternative, and a Project Site Reconfiguration Alternative. Both were selected due to their potential to at least partially meet the basic objectives of the proposed project, and to lessen or avoid significant environmental effects resulting from implementation of the proposed project.

a. Alternative 1 – No Project/No Action Alternative

Section 15126.6(e) of the CEQA Guidelines requires the analysis of a No Project Alternative. This no project analysis must discuss existing conditions, as well as what would be reasonably expected to occur in the foreseeable future if the project were not to be approved based on current plans, site zoning, and consistent with available infrastructure and community services. Because the proposed project is a development project, Section 15126.6(e)(3)(B) of the *CEQA Guidelines* is directly applicable to the proposed project.

> "If the project is a development project on an identifiable property, the "no project" alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved. If disapproval of the project would result in predictable actions by others, such as the proposal of some other project, this "no project" consequence should be discussed. In certain instances, the "no project" alternative means "no build" wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment."

b. Alternative 2 – Reduced Operations Alternative

The Reduced Operations Alternative assumes a smaller water bottling facility compared to the proposed project, with facilities and bottling capacity reduced by 50 percent. Only the Phase I bottling facility would be constructed, consisting of two bottling lines and four loading docks would be constructed. Components constructed under this alternative would include a new permanent access road from US 395, a fire suppression building, on-site underground water lines serving the bottling operations, a stormwater detention basin, a leach mound system, fire hydrants, and a fire access road. The volume of groundwater pumped under this alternative would be reduced by up to 50 percent compared to the proposed project.

c. Alternative 3 – Project Site Reconfiguration Alternative

Under the Project Site Reconfiguration Alternative, the water bottling facility and ancillary facilities would still be constructed, but would be relocated within Cabin Bar Ranch adjacent to US 395, south of Cartago Creek and in the vicinity of the proposed new roadway access from US 395. Phases I, II and III of the proposed project would be constructed. Construction would take place in the same number and sequencing of phases as the proposed project. At buildout, the plant would be the same size as the proposed project, and

with the same bottling capacity, and the same volume of groundwater proposed to be pumped under the project would be pumped under this alternative.

d. Environmentally Superior Alternative

15126.6(e)(2) of the CEQA Guidelines indicates that an analysis of alternatives to a proposed project shall identify an environmentally superior alternative among the alternatives evaluated in an EIR. The CEQA Guidelines also state that should it be determined that the No Project Alternative is the environmentally superior alternative, the EIR shall identify another environmentally superior alternative among the remaining alternatives. With respect to identifying an environmentally superior alternative among those analyzed in this EIR, the range of feasible alternatives to be considered includes Alternative 1, No Project/No Action Alternative; Alternative 2, Reduced Operations Alternative; and Alternative 3, Project Site Reconfiguration Alternative.

A comparative summary of the environmental impacts anticipated under each alternative with the environmental impacts associated with the proposed project is provided in Table 5-1 in **Section 5.**0, *Alternatives*, of this EIR. Based on the evaluation of impacts presented in Chapter 5 of this EIR, the Reduced Operations Alternative as determined to be the environmentally superior alternative, since it would reduce the proposed project's significant but mitigable impacts on air quality, biological resources, archaeological resources, paleontological resources, and historical resources.

The Reduced Operations Alternative, however, would only partially meet the project objective related to construction and operation of a spring water bottling, since it would reduce the size and capacity of the proposed plant. Additionally, this alternative would only partially achieve the objective related to creating new local employment opportunities, provide for adequate services and infrastructure to serve the project, and contribute to the County's tax base, since the reduced facility size, bottling capacity, and production would create fewer jobs, reduced revenue, and likely reduced infrastructure improvements.

7. SUMMARY OF ENVIRONMENTAL IMPACTS

This section provides a summary of impacts, mitigation measures, and impacts after implementation of the mitigation measures associated with development of the proposed. The summary is provided by environmental issue area below in **Table ES-1**, *Summary of Project Impacts and Mitigation Measures*.

Table ES-1

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
A. AESTHETICS		
Views and Scenic Vistas Construction Construction of the proposed project would change the site's appearance temporarily, due to the presence of construction vehicles and equipment; however, these temporary changes are not anticipated to affect views across the site or impede the ability to enjoy scenic vistas in the area. Therefore, construction impacts to views and scenic vistas are less than significant.	No mitigation required.	Less Than Significant
Operation Operation of the proposed project would alter the site's appearance, due to the presence of the water bottling facility and automobiles and trucks accessing the site. However, this will not negatively affect the views across the site or impede the ability to enjoy scenic vistas in the area. Therefore, operational impacts to views and scenic vistas are less than significant.	No mitigation required.	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
Visual Character Construction Construction of the proposed project would temporarily introduce construction equipment and vehicles on the site, and the visual character of the site would be slightly altered. This impact would be less than significant.	No mitigation required.	Less Than Significant
Operation Operation of the proposed project would alter the visual character of the site by introducing the water bottling facility on the currently vacant site. The facility would be set back from I-395 and would not significantly alter the visual character of the site. This impact would be less than significant.	No mitigation required.	Less Than Significant
Light and Glare Construction Construction of the proposed project would only occur during the day, and there would be limited new sources of light and glare. This impact would be less than significant.	No mitigation required.	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
Operation Operation of the proposed project would introduce new perimeter lighting and other light sources around the loading docks, parking areas and roadway. Project design features would be incorporated to reduce light impacts and the project would not be designed with glare inducing materials. This impact would be less than significant.	No mitigation required.	Less Than Significant
B.1 AIR QUALITY		
Compliance with Owens Valley PM10 State Implementation Plan (SIP) and Other Applicable Policies The project would not conflict with or obstruct implementation of the State Implementation Plan (SIP) for the Owens Valley PM10 Planning Area, or with General Plan policies governing air quality.	No mitigation required.	Less Than Significant
Violation of Air Quality Standards Construction Project construction would generate particulate matter (i.e., fugitive dust), and the Great Basin Unified Air Pollution District considers all fugitive dust emissions from construction activities potentially significant, with no acceptable threshold.	Mitigation Measure AQ-1: All active portions of the construction site shall be watered to prevent excessive amounts of dust. Mitigation Measure AQ-2: On-site vehicles' speed shall be limited to 15 miles per hour (mph). Mitigation Measure AQ-3: All on-site roads shall be paved as soon as feasible or watered periodically or chemically stabilized.	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
	Mitigation Measure AQ-4: All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust; watering, with complete coverage, shall occur at least twice daily, preferably in the late morning and after work is done for the day. Mitigation Measure AQ-5: If dust is visibly generated that travels beyond the site boundaries, clearing, grading, earth moving or excavation activities that are generating dust shall cease during periods of high winds (i.e., greater than 25 mph averaged over one hour) or during Stage 1 or Stage 2 smog episodes. Mitigation Measure AQ-6: All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.	
Operation Neither employee trips nor truck trips for delivering supplies or transporting finished product would generate significant mobile source emissions. Project operations, including the bottling facilities, warehouse, and operation of ancillary facilities, would not generate significant stationary source emissions.	No mitigation required	Less Than Significant
Cumulatively Considerable Increase in Criteria Pollutants The project would result in temporary construction emissions, but required control measures would emissions to a less than significant level. Long-term NOx, VOC, and PM10 emissions resulting from project operations would be below	No mitigation required	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
applicable thresholds and consistent with applicable established in the General Plan Air Quality Element goals.		
Exposure of Sensitive Receptors to Substantial Pollutant Concentrations Construction The nearest sensitive receptors are 300 feet north of the project site boundary, in Cartago, and are sufficiently distant to preclude impacts from construction activities such as mass grading, excavation, fine grading, and paving activities.	No mitigation required.	Less Than Significant
Operation The project would generate a relatively small number of traffic trips, including employee trips and delivery or transport truck trips, and no localized "hot spot" impacts associated with elevated ambient pollutant levels at nearby roadways or intersections are anticipated.	No mitigation required.	Less Than Significant
Objectionable Odors Potential sources of odors during construction activities include architectural coatings and solvents and diesel exhaust from construction equipment With compliance with mandatory GBUAPCD Rule 402 (Nuisance), no construction activities or materials are anticipated to result in objectionable odors. Therefore, no impact would occur and no mitigation measures	No mitigation required.	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
would be required.		
B.2 GLOBAL CLIMATE CHANGE		
Threshold 4.F-1: Based on the relatively low level of net new GHG emissions expected, project implementation would not cause significant GHG emissions.	No mitigation required.	Less Than Significant
Threshold 4.F-2: Project implementation would result in less than significant impacts regarding GHG emissions based on the project's compliance with applicable regulatory requirements and would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	No mitigation required.	Less Than Significant
Threshold 4.F-3: The project, combined with cumulative projects, would not result in cumulative GHG impacts.	No mitigation required.	Less Than Significant
C. BIOLOGICAL RESOURCES		
Special Status Plants The Owen's Valley checkerbloom, a State Endangered species, is found only in the Owen's Valley and the presence of between 1,500 and 2,000 specimens on Cabin Bar Ranch was documented in 1988. This species may still be present on the project site, and its removal as the result of project construction would be considered a significant impact. Other special status plant species that have the potential to occur on the project	Mitigation Measure BIO-1a: Should focused surveys determine the presence of the Owen's Valley checkerbloom, Fish Slough milk-vetch, Inyo County mariposa lily, silverleaf milk-vetch, alkali ivesia, Inyo phacelia, or any other sensitive plant species and impacts are determined to be significant, impacts to the species shall be avoided or minimized to the maximum extent practicable. If impacts to the sensitive plant species cannot be avoided, mitigation shall include one or more of the following measures at a mitigation-to-impact ratio of no less than 1:1, along with the preparation of a Species Mitigation and Monitoring Plan (SMMP), as appropriate, which would reduce impacts to less than	c

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
site due to the presence of potentially suitable habitat include Tulare rockcress, upswept moonwort, scalloped moonwort, mingan moonwort, Kern Plateau bird's beak, sanicle cymopterus, Kern River fleabane, field ivesia, creamy blazing star, Charlotte's phacelia, Parish's popcorn-flower, Bailey's greasewood, Owen's Valley checkerbloom, cut-leaf checkerbloom, marsh arrow-grass, and grey-leaved violet. The removal of any specimens of these plants as the result of project construction would be considered a significant impact. With implementation of the required mitigation, which includes focused surveys and, if special status plant specimens are found and cannot be be avoided, the preparation of a Species Mitigation and Monitoring Plan (SMMP) and specimen replacement at an off-site location at a minimum 1:1 ratio, impacts would be reduced to a less than significant level.	significant. The Applicant shall work with a biologist or restoration specialist experienced with planning and implementing mitigation for special status plants in California. • Prior to disturbance activities, on- or off-site transplantation and/or seed and topsoil collection and seeding of individual plant species to a site where suitable habitat conditions exist shall be implemented. The Applicant shall ensure that the impacted plant species is restored at an appropriate off-site location. Restoration shall be implemented by the following measures: o For the Owen's Valley checkerbloom, all plant specimens shall be counted and all specimens within potential impact areas retained in place until they become dormant and the seed can be collected. Seed shall be stored in brown paper bags in a cool location until they have fully dried out and the seeds dehisced. Seeds must be planted within two years to assure preservation of the seed crop. If not planted in a designated mitigation site, seeds shall be propagated at a native plant nursery in pots until they may be outplanted to the mitigation site. As appropriate, this methodology may be used for other plant species, if present, as recommended by a biologist or restoration specialist experienced with special status plants in California. • Identify an appropriate off-site receptor area within the local watershed that has been designated for conservation (or shall be conserved) and where permission has been secured from the landowner / manager to accept a transplanted population of special plant species. The site shall be suitable and comparable-sized until a 1:1 ratio is met for the number of individuals and/or habitat impacted, as determined appropriate by a	

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
	biologist or restoration specialist experienced with special status plants in California. The Applicant shall be responsible for locating the off-site area, securing permission from the owner or management entity for the site(s) to receive seed or transplanted specimens, the success of the restoration, and to ensure the off-site area is conserved in perpetuity by a conservation entity. • Payment into an agency-approved off-site mitigation bank or agency-approved in-lieu fee agreement. • Off-site purchase and set aside and enhancement of land (either in-kind or out-of-kind). In addition, mitigation areas shall be placed under a conservation easement, deed restriction, or comparable legal instrument which prohibits or restricts land uses that are not compatible with conservation objectives and provides for long-term preservation.	
Special Status Wildlife Sensitive wildlife species with the potential to occur on the project site due to the presence of suitable habitat include Owen's tui chub, Owen's pupfish, Swainson's hawk, loggerhead shrike, yellow breasted chat, least bittern, least Bell's vireo, spotted bat, Owen's Valley vole, and Mohave ground squirrel. With respect to the yellow breasted chat, yellow warbler, and Least Bell's vireo, with implementation of the required mitigation measures, which include focused surveys and, if impacts cannot be avoided, either the creation or restoration of off-site	Mitigation Measure BIO-1b: *Yellow breasted chat* Should focused surveys determine the presence of the SSC yellow breasted chat and impacts are determined to be significant, impacts to the species shall be avoided or minimized to the maximum extent practicable. If impacts to the species cannot be avoided, mitigation shall include one or more of the following measures at a mitigation-to-impact ratio of no less than 1:1 which would reduce impacts to less than significant: • On- or off-site creation and/or restoration of 2.88 acres of riparian woodland. • Payment into an agency-approved off-site mitigation bank or agency-approved in-lieu fee agreement.	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
habitat or riparian woodland or payment of in-lieu fees, impacts would be reduced to a less than significant level. With respect to the Owens tui chub, Owens pupfish, and Owens speckled dace, with implementation of the required mitigation measures, which require focused surveys and, if impacts cannot be avoided, payment into an approved off-site mitigation bank or in-lieu fee agreement, or off-site relocation, impacts would be reduced to a less than significant level. With respect to the Swainson's hawk, with implementation of the required mitigation measure, which includes focused surveys and, if impacts cannot be avoided, preparation of a Swainson's hawk Monitoring and Mitigation Plan in consultation with the California Department of Fish and Game (CDFG), impacts would be reduced to a less than significant level. Finally, with respect to the Mohave ground squirrel, with implementation of the required mitigation measure, which includes focused surveys and, if impacts cannot be avoided, relocation to off-suite habitat acquired and managed for the purpose, payment to eliminate grazing in an area of otherwise suitable habitat, or the restoration of suitable habitat for the species, impacts would be reduced to a less than significant level.	• Off-site purchase and set aside and enhancement of land with suitable yellow breasted chat habitat. In addition, mitigation areas shall be placed under a conservation easement, deed restriction, or comparable legal instrument which restricts land uses and provides for its long-term preservation. *Yellow warbler* Should focused surveys determine the presence of the SSC yellow warbler and impacts are determined to be significant, impacts to the species shall be avoided or minimized to the maximum extent practicable. If impacts to the species cannot be avoided, mitigation shall include one or more of the following measures at a mitigation-to-impact ratio of no less than 1:1 which would reduce impacts to less than significant: • On- or off-site creation and/or restoration of 2.88 acres of riparian woodland. • Payment into an agency-approved off-site mitigation bank or agency-approved in-lieu fee agreement. • Off-site purchase and set aside and enhancement of land with suitable yellow breasted chat habitat. In addition, mitigation areas shall be placed under a conservation easement, deed restriction, or comparable legal instrument which restricts land uses and provides for its long-term preservation. *Owen's tui chub* Should pre-construction surveys determine the presence of the Federal and State Endangered Owen's tui chub and impacts are determined to be significant, then impacts to the species shall be avoided or minimized to the	

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
	maximum extent practicable. If impacts to the species cannot be avoided, mitigation shall include one or more of the following measures which would reduce impacts to less than significant: • Payment into an agency-approved off-site mitigation bank or agency-approved in-lieu fee agreement. • Off-site relocation. In addition, mitigation areas shall be placed under a conservation easement, deed restriction, or comparable legal instrument which restricts land uses and provides for its long-term preservation. Furthermore, the Applicant shall coordinate with the USFWS and CDFG to determine the need for a Section 7 consultation in compliance with the Federal Endangered Species Act (ESA) and obtaining an Incidental Take Permit in compliance with the State ESA, respectively. *Owen's pupfish* Should pre-construction surveys determine the presence of the Federal and State Endangered Owen's pupfish and impacts are determined to be significant, then impacts to the species shall be avoided or minimized to the maximum extent practicable. If impacts to the species cannot be avoided, mitigation shall include one or more of the following measures which would reduce impacts to less than significant: • Payment into an agency-approved off-site mitigation bank or agency-approved in-lieu fee agreement. • Off-site relocation. In addition, mitigation areas shall be placed under a conservation easement, deed restriction, or comparable legal instrument which restricts land uses and provides	

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
	for its long-term preservation. Furthermore, the Applicant shall coordinate with the USFWS and CDFG to determine the need for a Section 7 consultation in compliance with the Federal ESA and obtaining an Incidental Take Permit in compliance with the State ESA, respectively. *Owens speckled dace* Should pre-construction surveys determine the presence of the SSC Owens speckled dace and impacts are determined to be significant, then impacts to the species will be avoided or minimized to the maximum extent practicable. If impacts to the species cannot be avoided, mitigation will include one or more of the following measures which would reduce impacts to less than significant: • Payment into an agency-approved off-site mitigation bank or agency-approved in-lieu fee agreement. • Off-site relocation. In addition, mitigation areas will be placed under a conservation easement, deed restriction, or comparable legal instrument which restricts land uses and provides for its long-term preservation. *Swainson's hawk* The CDFG considers a nest site to be active if it was used at least once during the past 5 years. Impacts to suitable habitat or individual birds within a five-mile radius of an active nest will be considered significant and to have the potential to "take" Swainson's hawks as that term is defined in Fish and Game Code Section 86. Should focused surveys determine the presence of the State Threatened Swainson's hawk and impacts are determined to be significant, impacts to the species shall	

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
	be avoided or minimized to the maximum extent practicable. If impacts to the species cannot be avoided, mitigation in consultation with the CDFG shall include the following measure which would reduce impacts to less than significant: • Prepare a Swainson's hawk Monitoring and Mitigation Plan. Plans shall be prepared by a qualified biologist approved by the CDFG and the appropriate lead agency and include detailed measures to avoid and minimize impacts to Swainson's hawks in and near the construction areas. For example: • If a nest site is found, design the project to allow sufficient foraging and fledging area to maintain the nest site. • During the nesting season, ensure no new disturbances, habitat conversions, or other project-related activities that may cause nest abandonment or forced fledging occur within 1/2 mile of an active nest between March 1 and September 15. Buffer zones shall be adjusted in consultation with the CDFG and the lead agency. • Do not remove Swainson's hawk nest trees unless avoidance measures are determined to be infeasible. Removal of such trees shall occur only during the timeframe of October 1 and the last day in February. The Monitoring and Mitigation Plan shall also include measures for injured Swainson's hawks as well as focus on providing habitat management lands. In addition, the Applicant shall coordinate with the CDFG to determine the need for an Incidental Take Permit in compliance with the State ESA.	

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
	Least Bell's vireo Should focused surveys determine the presence of the Federal and State Endangered least Bell's vireo and impacts are determined to be significant, impacts to the species shall be avoided or minimized to the maximum extent practicable. If impacts to the species cannot be avoided, mitigation shall include one or more of the following measures at a mitigation-to-impact ratio of no less than 1:1 which would reduce impacts to less than significant: • On- or off-site creation and/or restoration of 2.88 acres of riparian woodland. • Payment into an agency-approved off-site mitigation bank or agency-approved in-lieu fee agreement. • Off-site purchase and set aside and enhancement of land with suitable Least Bell's vireo habitat. In addition, mitigation areas shall be placed under a conservation easement, deed restriction, or comparable legal instrument which restricts land uses and provides for its long-term preservation. This mitigation can be satisfied with other riparian-warranted mitigation. Furthermore, the Applicant shall coordinate with the USFWS and CDFG to determine the need for a Section 7 consultation in compliance with the Federal ESA and obtaining an Incidental Take Permit in compliance with the State ESA, respectively. *Mohave Ground Squirrel* Should focused surveys determine the presence of the State Threatened Mohave ground squirrel and impacts are determined to be significant, impacts to the species shall be avoided or minimized to the maximum extent practicable. If impacts to the species cannot be avoided,	

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
	mitigation in consultation with the CDFG shall include one or more of the following measures at a mitigation-to-impact ratio of no less than 1:1 which would reduce impacts to less than significant: • Relocation of the species by a qualified biologist who shall manage the safe capture of the species and move them to suitable alternate site. • Acquire lands that support high quality Mohave ground squirrel habitat and pay a one-time fee to manage these lands. • Purchase grazing leases on BLM grazing allotments with suitable habitat for the species and eliminate the grazing there. • Restore disturbed native vegetation to create habitat suitable to the Mohave ground squirrel on public or State lands in the vicinity. In addition, mitigation areas shall be placed under a conservation easement, deed restriction, or comparable legal instrument which restricts land uses and provides for its long-term preservation. This mitigation can be satisfied with other riparian-warranted mitigation. Furthermore, the Applicant shall coordinate with the CDFG to determine the need for an Incidental Take Permit in compliance with the State ESA.	

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
Sensitive Plant Communities One sensitive plant community, a red willow thicket of approximately 4.20 acres in size, is present in the project area on Cabin Bar Ranch. Project construction would remove approximately 2.88 acres of this thicket, which is considered a significant impact. With implementation of the required mitigation measures, which includes preparation of a mitigation and monitoring plan for the restoration of similar, but disturbed, habitat on-site or off-site, and sets forth performance standards concerning implementation of the plan, maintenance, monitoring, success criteria, and long-term management, impacts would be reduced to a less than significant level.	Mitigation Measure BIO-2: Prior to the issuance of any grading permit in the areas designated as red willow thicket, a mitigation and monitoring plan shall be prepared. The plan shall focus on the creation of equivalent habitats within disturbed habitat areas of the study area and/or off-site areas beyond the study area with suitable soils and hydrology. In addition, the plan shall provide details as to the implementation of the plan, maintenance, monitoring, success criteria, and long-term management. Mitigation for impacts to this sensitive plant community shall be offset by on- or off-site replacement, restoration, or enhancement of each respective sensitive plant community at a mitigation-to-impact ratio of no less than 1:1 in one or more of the following ways, which would reduce impacts to below a level of significance. The Applicant shall work with a biologist or restoration specialist experienced with planning and implementing mitigation for plant communities in California. • Prior to disturbance activities, on- or off-site transplantation and/or seed and topsoil collection and seeding of individual plant species to a site where suitable habitat conditions exist shall be implemented. • Seeding of sensitive plant community species. • Planting of container plants of sensitive plant community species. • Salvage of duff and seed bank prior to disturbance activities, and subsequent dispersal. A 1:1 mitigation ratio for impacts to sensitive plant communities is considered to be adequate due to the disturbed condition of such communities on-site today	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
	(for example, the on-site red willow thicket contains invasive plant species as well as ornamental trees and shrubs).	
"Waters of the U.S.," "Waters of the State," and Wetlands The area potentially affected by the proposed project supports approximately 6.03 acres of ACOE/RWQCB jurisdictional "waters of the U.S." and 6.16 acres of CDFG jurisdictional streambed and associated riparian habitat, including 5.97 acres of wetlands. Approximately 0.06 acres of non-wetland ACOE/RWQCB jurisdictional "waters of the U.S." and 0.19 acres of CDFG jurisdictional streambed is present within the portion of Cartago Creek and the man-made ditch that cross the project site and adjacent land. The 5.97 acres of wetlands within the study area is in the eastern portion of the project site, immediately adjacent to the Owens Lake Playa. Project implementation would permanently impact through removal approximately 0.01 acre of non-wetland ACOE/RWQCB "water of the U.S." and 0.12 acres of CDFG jurisdiction associated with Cartago Creek, in order to install a culvert crossing for the proposed new access road from US 395. Project implementation would also permanently impact proximately 0.03 acre of unvegetated non-wetland ACOE/RWQCB jurisdiction and 0.04 acre of CDFG jurisdiction within an unvegetated man-made swale on the	Mitigation Measure BIO-3: Prior to the issuance of any grading permit for impacts jurisdictional features, the project applicant shall obtain a CWA Section 404 Permit from the ACOE, a CWA Section 401 Water Quality Certification from the RWQCB, and California FGC Section 1602 Streambed Alteration Agreement from the CDFG. Mitigation for impacts to ACOE, RWQCB, and CDFG jurisdictional features shall include one or more of the following measures, which would reduce impacts to below a level of significance: • On- and/or off-site replacement of ACOE/RWQCB jurisdictional "waters of the U.S."/"waters of the State" and wetlands at a ratio no less than 1:1 mitigation to impact ratio, or as required by the agencies. Off-site replacement may include the purchase of mitigation credits at an agency-approved mitigation bank or payment into an in-lieu fee agreement. • On- and/or off-site replacement of CDFG jurisdictional streambed and associated riparian habitat at a ratio no less than 1:1 replacement to impact ratio, or as required by CDFG. Off-site replacement may include the purchase of mitigation credits at a CDFDG-approved mitigation bank or payment into an in-lieu fee agreement. Mitigation Measure BIO-4: Riparian and Wetland Monitoring and Adaptive Management Program • Riparian and wetland vegetation associated with jurisdictional features regulated by the USACE, RWQCB,	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
proposed site of the main bottling facility. Permanent impacts to non-wetland ACOE/RWQCB "waters of the U.S." totals approximately 0.04 acre, and permanent impacts to non-wetland CDFG jurisdictional resources total 0.16 acre for the proposed project. These are considered significant impacts. With implementation of the required mitigation, which includes on- and/or off-site replacement of ACOE/RWQCB jurisdictional "waters of the U.S."/"waters of the State" and wetlands, and on- and/or off-site replacement of CDFG jurisdictional streambed and associated riparian habitat, at a minimum 1:1 replacement ratio, or as required by the regulatory agencies, or the purchase of mitigation credits at an mitigation bank or payment into an in-lieu fee agreement, impacts would be reduced to a less than significant level. Project implementation also has the potential to result in permanent impacts on jurisdictional resources as the result of seasonal lowering of the groundwater table due to pumping. Under the "long-term" scenario, with a combined average pumping rate of 170 gallons per minute (gpm) throughout the year, the decrease in spring flow along the Spring Line fault was estimated to be approximately 17 percent. Under a short-term, high-production pumping scenario, with a combined average pumping rate of 500 gpm during the three-month summer period, a	and/or CDFG, including obligate and facultative hydrophytic plant species, exist within and adjacent to"downhill" from the proposed project. PresumablyAs suggested by the geohydrology report, this riparian and wetland vegetation is supported by is the groundwater table which receives hydrologic inputs fromsupported by rain and , snowmelt runoff, input from natural seeps and springs, and by the groundwater table beneath the project site and likely affects the shallow aquifer that contributes to surface flow from natural seeps and springs associated with geologic fracturing and fault scarps such as the Spring Line fault. It is not known what percentage of the supporting water annually comes from each of these sources. In addition, determining the amounts, by source, of supporting water and its relationship to the presence of riparian and wetland plant species, would require several years of data and installation of additional gauges, where the data ultimately collected could be difficult to interpret given seasonal variations and other factors. Therefore, the potential for impacts associated with the proposed project increase in extracting groundwater cannot be accurately determined based on available information. Due to this uncertainty, a Riparian and Wetland Monitoring and Adaptive Management Program (RWMAMP) for vegetation associated with jurisdictional areas, is proposed as mitigation. • The RWMAMP is designed with a performance standard to respond to any significant loss of riparian and wetland vegetation and habitats within jurisdictional areas due to the increased pumping and production. The County, as lead agency for the proposed project, will be the entity responsible for ensuring the RWMAMP is implemented and annual reports are prepared. In addition, the need for responsive measures and how they	

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
temporary decrease in flows along the Spring Line fault due to reduced groundwater levels was estimated to be approximately 38 percent. A year-round average pumping rate of 225 gpm, was calculated to result in a theoretical drawdown of groundwater levels by 0.54 feet in in wells CGR-1 and CGR-3, near the southern property line of Cabin Bar Ranch, after 30 days of continuous pumping, and a maximum theoretical drawdown of 0.87 feet after 360 days of continuous pumping in piezometer P-12, near the ranch's northern property boundary. Accordingly, groundwater pumping effects on the water table level may indirectly impact a portion of the playa wetlands and/or riparian vegetation associated with Cartago Creek, the extent of which cannot be accurately determined. Therefore, mitigation to reduce this potential impact to a less than significant level is provided in Section 3.2.c.	will be carried out will be documented. As trustee agencies, the state and federal resource agencies, as appropriate, will be provided copies of the annual reports and related documentation concerning responsive measures for their review and comment. • Approach. The methodology for monitoring is a variation of methods presented in Monitoring the Vegetation Resources in Riparian Areas (Winward 2000) . This General Technical Report prepared by the U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, provides information on the use and application of three sampling methods to inventory and monitor the vegetation resources in riparianjurisdictional areas. These methods are: 1) the vegetation cross-section method that evaluates the health of vegetation across a riparian corridor; 2) the greenline method that provides a measurement of the streambed associatedside vegetation and/or wetlands; and, 3) the woody species regeneration that measures the density and age class structure of shrub and tree species that may be in the sampling area. It should be noted that modifications made to the Winward methodology and incorporated into the RWMAMP are intended to reduce observer variability as discussed in Coles-Ritchie, et. al. (2004). • Assessment of Vegetation Health. The vegetation cross-section method will consist of at least five permanently marked line-point transects aligned perpendicular to USACE, RWQCB, and CDFG jurisdiction associated with Cartago Creek and the edge of the wetland area at three (3) established monitoring stations. The transects will be placed in such a way to best represent the riparian and/or wetland communities being monitored and, to the extent practicable, will be long enough to span the observed riparian corridor and	

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
	delineated wetland edge. Species composition and cover will be obtained by collecting data on species present every 0.5 meter (approximately 20 inches). Cover data will be determined by dividing the number of points where vegetation cover is observed by the total number of points on the transect. Composition data will be determined by dividing the number of points where a particular plant species is observed by the total number of points where vegetation cover is observed on the transect. Photographs will also be taken in the direction of the transect from the start and end points. • Measurement of Riparian and WetlandStreamside Vegetation. The greenline method will be used to provide an indication of the immediate riparianstreamside and wetland edge vegetation composition associated with jurisdictional areas. The greenline itself will be identified by the edge of riparian and wetland vegetation. As such, the greenline method is designed to account for a continuous line of vegetation along the wetland edge and on each side of Cartago Creeka stream (excepting road and trail crossings) even when this line of vegetation occurs several feet above or away from the stream's edge (usually the ordinary high water mark). The greenline transect will begin at the crossing of the most "uphill" cross-section transect, on the right side (looking downstream) of Cartago Creek and the most "uphill" cross-section transect across the wetland edge. Using the step transect method, the monitor will proceed downstream a minimum of 100 meters (approximately 328 feet and considered to be the minimum distance needed to encompass the potential variation within a riparian complex), cross Cartago Creek, and walk upstream on the opposite side of the creek until opposite the starting point. In the case of the wetland edge, the transect will follow the edge in one direction only. Data	

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
	on riparian and wetland plant species (obligate and facultative hydrophytes) canopy and understory will be collected every four (4) steps (approximately 8 feet). Percent cover and species composition will be calculated as described above for the cross-section method. • Measurement of Woody Riparian Species Regeneration. Woody species regeneration will be measured by using the same transects used for greenline measurements. . At each data collection step for the greenline method, the observer will use a 1-meter stick to collect data on woody vegetation within a circle having a radius of one (1) meter from the toe-point of the step. All woody plants rooted within the circle will be tallied based on age-class categories (sprout, young, mature, decadent and dead, as defined by Winward (2000). Data will be analyzed for age class distribution and species composition as described above. • Monitoring Stations and Monitoring Regime. To best elucidate the relationship between the increased pumping and the maintenance, health and vigor of riparian and wetland vegetation, as well as the role of rain, snowmelt runoff, and/or inputs from several natural seeps and springs along its length, and natural accretion in supporting riparian and wetland vegetation in the area, three monitoring stations will be established: 1) just upstream from the point where Cartago Creek's bed and bank characteristics are lost due to sheet flow; and 2) at a two locations where existing natural springs exist that can be monitored along one or more of the five transects established at each monitoring station near the proposed plant facility, 3) at a location removed from the proposed plant facility. The measurement of baseline, or starting conditions, following the methods outlined above, will be conducted in mid- to late August (corresponding to the arid and most stressful conditions	

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
	for riparian and wetland plant species in the beginning year of the RWMAMP. Monitoring at these stations, following the methods outlined above, will take place in mid to late August during each following year of monitoring. Monitoring will be conducted annually for the first three (3) years in order to discern the potential loss of riparian wetland vegetation in the area, and implement responsive measures if necessary, as set forth below. Following year three (3) of monitoring, if no loss of riparian and wetland communities is detected due to the increased pumping, monitoring will take place at year six (6) following the onset of increased pumping. If, at the end of the entire 6-year monitoring program no significant loss of riparian and wetland communities is detected, the monitoring program will be terminated. • Assessment of Monitoring Data. The effects of increased pumping, if any, will be assessed through examination of the various data collected during monitoring and the identification of trends regarding the stability of the riparian and wetland communities being monitored. First, the percent cover of obligate and facultative hydrophytes obtained through application of the vegetation cross-section method will be analyzed. Should the percent cover of these plant species exhibit a decreasing trend and/or decrease on a cumulative basis by more than 20 percent of their baseline values at any time during the monitoring program, responsive measures will be implemented as presented below. Second, should the percent cover along the greenline exhibit a decreasing trend and/or decrease on a cumulative basis by more than 20 percent of their baseline values at any time during the monitoring program, responsive measures will be implemented as set out below. Third, should the woody recruitment data exhibit a decreasing trend in young (>3 years old) or	

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
	mature riparian woody plants and/or decrease on a cumulative basis by more than 20 percent of their baseline values, again, adaptive management measures will be implemented as set out below. Assessment of all three data sets will be used to determine the need and type of adaptive management measures to be implemented. It should also be noted, however, that in its analysis, the monitoring program will assess any losses stipulated above against the amount of snow- melt runoff and rainfall in that year. That is, during dry years, the health and vigor of hydrophytic plants may decrease independent of the increased pumping. Conversely, hydrophytes may flourish during wet years. In both cases, consideration will be made for climatic conditions when examining community and population trends. • Adaptive Management Measures. The adaptive management strategy for identified degradation and/or loss of riparian and wetland communities within jurisdictional areas shall include creation, restoration and/or enhancement of riparian and/or wetland habitat. The adaptive management shall be accomplished in one or more of the following ways: a) creation, restoration and/or enhancement of habitat on property owned by Crystal Geyser; b) creation, restoration and/or enhancement outside the property, but within lower Owens River Basin; and c) payment of in lieu fees to an existing riparian or wetland mitigation/conservation bank and/or existing management and/or enhancement program in the Eastern Sierra region. The selection of a site or program to which adaptive management measures will be applied will set a priority for locations where the highest benefit to habitat can be realized. The payment of in lieu fees, if such a program exists, will fulfill these requirements, in part or in full. For adaptive management entailing habitat creation, restoration	

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
	and/or enhancement, a Habitat Management and Monitoring Plan shall be prepared for review and approval by the County and trustee agencies, as appropriate. The plan will stipulate success criteria for the habitat being created, restored and/or enhanced and will be monitored by a qualified restoration ecologist for five years or until such time as the success criteria are met, but no sooner than one year following cessation of all inputs (e.g., soil amendments, irrigation, etc.) to the creation, restoration and/or enhancement project. The success criteria will address requirements for no significant net loss of riparian and/or wetland habitat regulated by the USACE, RWQCB, and/or CDFG and will focus on habitat replacement to the extent practicable and satisfactory to the participating trustee resource agencies. • Reporting Procedures. Annual reports and data records will be submitted by the monitor to the County at the end of each year of monitoring. Following the submittal and depending on the need for adaptive management responses or remedial action, the County may elect to consult with trustee agencies.	
Nesting Birds The study area has the potential to support both raptor and songbird nests due to the presence of trees, shrubs, and ground cover. Disturbing or destroying active nests is a violation of the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et seq.) and the California Department of Fish and Game Code Sections 3503, 3503.5 and 3513. The statutes make it unlawful to pursue, hunt, take, capture, kill or sell birds listed therein ("migratory birds").	Mitigation Measure BIO-5: The Applicant shall be responsible for implementing mitigation to reduce potential impacts to migratory raptor and songbird species to below a level of significance by the following: (1) Vegetation removal activities shall be scheduled outside the nesting season for raptor and songbird species (typically September 1 to February 14) to avoid potential impacts to nesting species (this will ensure that no active nests will be disturbed and that habitat removal could proceed rapidly); and/or (2) Any construction activities that occur during the raptor and songbird nesting season (typically February 15 to August 31) shall require that all suitable habitat be thoroughly surveyed	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
Nesting activity typically occurs from February 15 to August 31. In addition, nests and eggs are protected under Fish and Game Code Section 3503. The removal of vegetation during the breeding season is considered a potentially significant impact. With implementation of the mitigation measure described in Section 3.2d below, potentially significant impacts to migratory raptor and songbird species would be reduced to a less than significant level.	for the presence of nesting raptor and songbird species by a qualified biologist before commencement of clearing. If any active nests are detected, a buffer of at least 300 feet (500 feet for raptors) shall be delineated, flagged, and avoided until the nesting cycle is complete as determined by the qualified biologist to minimize impacts.	
D. ARCHAEOLOGICAL/PALEONTOLOGICAL RESOURCES		
Buried Archaeological Resources The proposed project would not cause a substantial adverse change in the significance of a *known* archaeological resource pursuant to §15064.5 of the CEQA Guidelines. However, given the identification of more than 30 archaeological resources within and in the immediate vicinity of the project site and the favorable natural conditions (i.e., Owens Lake, Cartago Creek, natural springs, and vegetation communities) that would have attracted prehistoric and historic inhabitants to the project site, the project has the potential to cause a substantial adverse change in the significance of previously unknown buried archaeological resources pursuant to §15064.5 of the CEQA Guidelines during implementation of the proposed project.	Mitigation Measure ARCH-1a: The Applicant shall retain a qualified archaeological monitor and Native American monitor who shall be present during construction excavations such as grading, trenching, grubbing, or any other construction excavation activity associated with the proposed project. The frequency of monitoring shall be based on the rate of excavation and grading activities, proximity to known archaeological resources, the materials being excavated (native versus fill soils), and the depth of excavation, and if found, the abundance and type of archaeological resources encountered. Full-time monitoring can be reduced to part-time inspections if determined adequate by the archaeological monitor. Mitigation Measure ARCH 1b: In the event that archaeological resources are unearthed during ground-disturbing activities, the archaeological monitor shall be empowered to halt or redirect ground-disturbing activities away from the vicinity of the find so that the find can be evaluated. Work shall be allowed to continue	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
The overall sensitivity of the project site with respect to buried archaeological resources appears to be high. Therefore, impacts on buried archaeological resources are considered to be potentially significant.	outside of the vicinity of the find. All archaeological resources unearthed by project construction activities shall be evaluated by the archaeologist. The Applicant shall coordinate with the archaeologist, the County, and the Native American representative to develop an appropriate treatment plan for the resources. Treatment may include implementation of archaeological data recovery excavations to remove the resource or preservation in place. The landowner, in consultation with the archaeologist, the County, and the Native American representative shall designate repositories in the event that archaeological material is recovered.	
	Mitigation Measure ARCH-1c: The archaeological monitor shall prepare a final report at the conclusion of archaeological monitoring. The report shall be submitted by the Applicant to the County, the Eastern Information Center, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the project and required mitigation measures. The report shall include a description of resources unearthed, if any, treatment of the resources, and evaluation of the resources with respect to the California Register of Historical Resources and the National Register of Historic Places.	
Disturbance of Human Remains According to records examined at the CHRIS-EIC, several Native American human remains have been encountered during past construction activities and several known Native American cemeteries are known to exist in the immediate vicinity of the project site and Cabin Bar Ranch property and in the surrounding region. Given the sensitive	Mitigation Measure ARCH-2a: If human remains are encountered unexpectedly during implementation of the proposed project, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the person(s) thought to be the Most Likely Descendent (MLD). The	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
and confidential nature of these types of resources, no specific locational or descriptive information will be provided. Although the project would not disturb any *known* human remains, the project has the potential to disturb *previously unknown* human remains during implementation of the proposed project. As a result, the overall sensitivity of the project site with respect to buried human remains appears to be high. Therefore, impacts on buried human remains are considered to be potentially significant.	MLD may, with the permission of the land owner, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The MLD shall complete their inspection and make their recommendation within 48 hours of being granted access by the land owner to inspect the discovery. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Upon the discovery of the Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this mitigation measure, with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment. Whenever the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or the landowner or his or her authorized representative rejects the recommendation of the descendants and the mediation provided for in Subdivision (k) of Section 5097.94, if invoked, fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not	

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
	subject to further and future subsurface disturbance.	
Buried Paleontological Resources Several fossil localities have been identified in the region at unknown depths below the ground surface in soil/sediment deposits that currently exist at an unknown depth within the project site. Although the project would not directly or indirectly destroy a *known* unique paleontological resource or site or unique geologic feature, the project has the potential to disturb *previously unknown* paleontological resources during implementation of the proposed project. As a result, the overall sensitivity of the project site with respect to buried paleontological resources appears to be high. Therefore, impacts on buried paleontological resources are considered to be potentially significant.	Mitigation Measure ARCH-3a: If construction excavations will reach depths of five feet or greater, a qualified paleontologist shall attend a pre-grading/excavation meeting and develop a paleontological monitoring program for excavations into older Quaternary Alluvium deposits. A qualified paleontologist is defined as a paleontologist meeting the criteria established by the Society for Vertebrate Paleontology. The qualified paleontologist shall supervise a paleontological monitor who shall be present at such times as required by the paleontologist during construction excavations below five feet or greater into older Quaternary Alluvium deposits. Monitoring shall consist of visually inspecting fresh exposures of rock for larger fossil remains and, where appropriate, collecting wet or dry screened sediment samples of promising horizons for smaller fossil remains. The frequency of monitoring inspections shall be determined by the paleontologist and shall be based on the rate of excavation and grading activities, the materials being excavated, and the depth of excavation, and if found, the abundance and type of fossils encountered. Mitigation Measure ARCH-3b: If a potential fossil is found, the paleontological monitor shall be allowed to temporarily divert or redirect grading and excavation activities in the area of the exposed fossil to facilitate evaluation and, if necessary, salvage. At the paleontologist's discretion and to reduce any construction delay, the grading and excavation contractor shall assist in removing rock samples for initial processing. Any fossils encountered and recovered shall be prepared to the point of identification and catalogued before they are donated to their final repository. Any fossils collected shall be donated to a	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
	public, non-profit institution with a research interest in the materials, such as the Eastern California Museum or the Natural History Museum of Los Angeles County. Accompanying notes, maps, and photographs shall also be filed at the repository. Mitigation Measure ARCH-3c: The paleontologist shall prepare a report summarizing the results of the monitoring and salvaging efforts, the methodology used in these efforts, as well as a description of the fossils collected and their significance. The report shall be submitted by the Applicant to the lead agency, the Eastern California Museum, the Natural History Museum of Los Angeles County, and other appropriate or concerned agencies to signify the satisfactory completion of the project and required mitigation measures.	
E. HISTORICAL RESOURCES		
Historical Resources The project site has a strong historical association with the early pattern of development of Inyo County as a center for mining between 1872 and 1900 and ranching between 1862 and 1986. The project site is an example of a rural historic landscape that reflects the local development of the County of Inyo mining and agriculture industry. The property's combination of landscape elements and historic sites (e.g., Cartago Station House Ruin, Cartago Boat Landing, Residence 2 and associated carriage road) are a rare mix of residential and commercial uses associated with the Espitacio Gomez	Mitigation Measure HIST-1: As part of the project, Residence 2 will be demolished. Residence 2 contains squared timber construction which appears to remain from the ca. 1871 cabin and has a potential to yield important information about significant historic activities conducted on the project site associated with the period of significance, ca. 1871-1883. The squared timber construction of the extant visible wall and any other historic fabric associated with the period of significance that may exist inside other walls, roof and floor of Residence 2, have a potential to yield important information about the site. The project applicant shall retain a qualified architectural historian or historical archaeologist to conduct construction monitoring during demolition of Residence 2. Any important historic fabric or artifacts associated with the period of significance, ca. 1871-1883, shall be fully recorded in photographic images and written manuscript notes. Significant	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
Ranch and the Cerro Gordo Freighting Company that once operated here on the shores of Owens Lake. The period of significance identified for the project site is ca. 1871 through the early 1880s, beginning with the construction of the Gomez homestead, a squared timber cabin constructed in 1871 (Residence 2; altered), the construction of the circa 1872 Cartago Boat Landing (Daneri's Landing)(ruined) and the associated stone Cartago Station House (ruined) for the Cerro Gordo Freighting Company and ending with the burning of the steamer the Bessie Brady in 1882 and construction of the railroad in the early 1880s. The Cartago Boat Landing (Daneri's Landing) is a previously designated California Point of Interest. Two historic sites, the Cartago Boat Landing and the Cartago Station House, are considered eligible as potential historical resources under National Register Criteria A, B and D, and California Register Criteria 1, 2 and 4. Residence 2 and the associated segment of old carriage road to Residence 2 is considered eligible under National Register Criterion D and California Register Criterion 4 as a potential historic site. The project site has a high probability for buried subsurface historic period remains associated with the activities of the Cerro Gordo Freighting Company from 1871 to the early 1880s. The remaining property improvements	material retrieved from the site shall be salvaged, inventoried and properly archived in a suitable publically accessible historical collection for further analysis and interpretation. A qualified architectural historian, historical archaeologist or historic preservation professional who satisfies the Secretary of the Interior's Professional Qualification Standards for History, Archaeology, or Architectural History pursuant to 36 CFR 61, shall prepare the necessary written and illustrated documentation in a construction monitoring and data recovery report. This document shall record the history of Residence 2 during the period of significance as well document its present physical condition through site plans; historic maps and photographs; sketch maps; 35mm photography; and written data and text. All documentation components shall be completed in accordance with the Secretary of the Interior's Standards for Historical Documentation. The completed documentation shall be placed on file at the Eastern Information Center (CHRIS-EIC), University of California, Riverside, CA; the Eastern California Museum; and the County of Inyo Public Library. Mitigation Measure HIST-2: The Applicant shall retain a qualified archaeological monitor for ground disturbing activities associated with the proposed project. The frequency of monitoring shall be based on the rate of excavation and grading activities, proximity to known archaeological resources, the materials being excavated (native versus fill soils), and the depth of excavation, and if found, the abundance and type of archaeological resources encountered. Full-time monitoring can be reduced to part-time inspections if determined adequate by the archaeological monitor. Mitigation Measure HIST-3: In the event that historic period archaeological resources are unearthed during	

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
lack sufficient age, integrity or significance to be considered eligible as potential historical resources.	ground-disturbing activities, the archaeological monitor shall be empowered to halt or redirect ground-disturbing activities away from the vicinity of the find so that the find can be evaluated. Work shall be allowed to continue outside of the vicinity of the find. All archaeological resources unearthed by Project construction activities shall be evaluated by the archaeologist. The Applicant shall coordinate with the historic archaeologist and the County to develop an appropriate treatment plan for the resources. Treatment may include implementation of archaeological data recovery excavations to remove the resource or preservation in place. The landowner, in consultation with the historic archaeologist and the County, shall designate repositories in the event that archaeological material is recovered. Mitigation Measure HIST-4: The archaeological monitor shall prepare a final report at the conclusion of archaeological monitoring. The report shall be submitted by the Applicant to the County, the Eastern Information Center, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the project and required mitigation measures. The report shall include a description of resources unearthed, if any, treatment of the resources, and evaluation of the resources with respect to the California Register of Historical Resources and the National Register of Historic Places. Mitigation Measure HIST-5: If human remains are encountered unexpectedly during implementation of the proposed project, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to	

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
	notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the person(s) thought to be the Most Likely Descendent (MLD). The MLD may, with the permission of the land owner, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The MLD shall complete their inspection and make their recommendation within 48 hours of being granted access by the land owner to inspect the discovery. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Upon the discovery of the Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this mitigation measure, with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment. Whenever the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or the landowner or his or her authorized representative rejects the recommendation of the descendants and the mediation provided for in Subdivision (k) of Section 5097.94, if invoked, fails to provide measures acceptable to the landowner, the landowner or his or her authorized	

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
	representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance.	
F. LAND USE AND PLANNING		
Planning and Policy Compliance The proposed project would be consistent with the applicable goals and policies of the Inyo County General Plan and a less than significant impact would result. With respect to land use designations, the project site is designated for Rural Protection (RP) and Rural Residential High Density (RRH) land uses in the Inyo County General Plan Land Use Element. Bottling facilities are not permitted in either the RP or RRH land use designations; therefore, a General Plan amendment is sought to accommodate the proposed project. Specifically, the General Plan amendment would apply the Light Industrial (LI) land use designation to approximately 23.46 acres of the project site.	No mitigation required.	Less Than Significant
G. HYDROGEOLOGY & SURFACE HYDROLOGY		
Water Quality and Waste Discharge <u>Construction</u> Construction of the proposed project would involve site preparation activities including site preparation, demolition, grading and installation of utility lines. As the construction site would be greater	No mitigation required.	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
than one acre, the project would be required to obtain a NPDES General Construction Activity Permit and would implement a SWPPP, which would specify BMPs and erosion control measures to be used during construction to prevent pollution. BMPs would eliminate or reduce pollutant levels in runoff during construction, consistent with regulatory requirements. In addition, any impacts would be short-term in nature, as this first phase of construction is estimated to take approximately two months. With compliance with NPDES requirements, construction-related impacts to hydrology (water quality and waste discharge) would be less than significant.		
Operation *Leach Mound:* As the proposed project would not be connected to a public sewer system, project-related wastewater would be disposed of on-site, and a septic tank is proposed for the primary treatment of domestic effluent from the site (e.g., restrooms, employee break area), with a leach mound system proposed for secondary treatment. The leach mound system design for the proposed project would be designed by a California-registered civil engineer and reviewed and permitted by Inyo County Environmental Health Department and prior to construction and installation.	No mitigation required.	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
Stormwater Detention Basin: The stormwater detention basin would be designed to facilitate the existing stormwater flow patterns across the project site, with stormwater collected from the area west of the basin and conveyed downslope (east) towards Owens Dry Lake. The basin would be designed in accordance with the applicable water quality regulations of the LRWQCB, so that no increase in stormwater flows is discharged off-site following completion of the proposed project construction. Operation of the proposed stormwater detention basin would also require a permit from the LRWQCB, would require compliance with Inyo County standards, and would be approved by the Inyo County Public Works (Building and Safety) Department. Based on the above, operational impacts to hydrology (water quality and waste discharge) would be less than significant.		
Groundwater Supplies and Recharge <u>Construction</u> Impacts to groundwater supplies and interference with groundwater recharge during construction would be limited, since construction would occur intermittently over the course of up to 15 years. Construction activities would require a limited amount of water use, for dust control, cleaning and other related activities. Water for construction related	No mitigation required.	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
activities would be pumped from the existing CGR-6 well and no new wells would need to be drilled for this purpose. Water use would be short term in nature and years apart during the three phases of project development. Construction-related impacts to groundwater supplies would therefore be less than significant.		
Operation *Proposed Project Water Demand* Existing wells CGR-8, CGR-9 and CGR-10, located west of the Spring Line fault but proximal to the proposed project site, are proposed to provide the entire supply of production water for the new bottling facility. These wells are planned to eventually produce a total of 360 acre-feet (AF) per year of groundwater from the shallow aquifer system, once the water bottling plant has been fully built out. Domestic potable water for employees of the proposed water bottling plant would be provided by on-site domestic groundwater well CBR-1. There is currently no existing public water system available for the site; however, existing domestic well CBR-1 is connected to the site through existing underground water lines, which was previously permitted by the Inyo County Environmental Health Services Department. Since the proposed on-site domestic potable water system would serve more than 25 employees	Mitigation Measure HYDRO-1: A regular program of data collection and database maintenance shall be undertaken to develop a long-term data set that can be reviewed for changes in groundwater conditions over time. Data collection efforts shall include the following: • For all wells on Cabin Bar Ranch that are currently pumped or are proposed to be pumped in the future, Crystal Geyser Roxane shall install meters inside their facility buildings (for security and/or maintenance reasons) or at the wellheads. Meters shall be equipped with properly calibrated and accurately-reading flow meters that read in both instantaneous flow (in gpm) and total flow (in gallons or AF), and that are located at a proper location on the discharge pipe near each wellhead. The totalizer flow dial data shall be monitored and recorded on a regular basis (i.e., at each well at least once each week). Flow meters shall be placed on each pumping well to allow for a more accurate determination of the amounts of groundwater to be pumped from CGR-8, CGR-9, and CGR-10, and also the amount currently pumped from the existing active plant wells (CGR-2 and CGR-7) and the two active domestic supply wells for the plant (CGR-3 and CGR-4). • Two active plant wells, CGR-2 and CGR-7, are equipped with pressure transducers which provide continuous monitoring of SWLs. Wells CGR-3 and CGR-4 shall be	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
(approximately 35 to 50 employees at full build-out), it would be designed to meet Inyo County water quality standards for a public water system. The volume of water to be pumped from this well is relatively small and impacts on groundwater recharge and off-site wells would be less than significant. *Spring Flows* Aquifer testing models were conducted which assumed an operational scenario for the proposed facility, with a total groundwater production of 360 AF per year. This scenario was intended to model long-term impacts on groundwater levels and spring flow volumes, based on average pumping rates and steady state conditions. Modeling suggested that spring flows could be decreased by up to 17.6 percent as the result of project-related groundwater pumping. Additional groundwater simulation modeling was conducted, in an effort to predict the potential impact on nearby springs along the Spring Line fault, assuming the conservative maximum demand of 200 AF over a 90-day period, thus simulating short-term high production demands that would take place during the summer months. The results of this simulation revealed that the total flow to the Spring Line fault springs could be reduced by up to 39 percent. However, it should be noted that under this scenario,	equipped with pressure transducers as well. • To monitor future water levels near the northern boundary of the proposed facility, well CBR-1 (the proposed domestic production well), located approximately 1,070 feet northeast of CGR-10, shall be equipped with a transducer to continuously record water levels. The well casing for CBR-1 is perforated between 60 and 120 feet bgs; these depths are in the same general perforation zones of CGR-8, CGR-9 and CGR-10 (53 feet to 88 feet bgs). Monitoring of the water levels in this on-site domestic-supply well would yield data on possible changes in the water levels that might be caused, as a result of the proposed pumping, on shallow off-site wells north and northwest of the facility. • Little long-term and regularly scheduled water quality data was available from the wells that could be analyzed for selected key water quality constituents, such as the general minerals (e.g. the common cations and anions) and inorganic chemicals (trace elements). To establish a database where possible long-term trends and changes in water quality may be evaluated, groundwater samples shall be collected at least once every three years from the pumping wells and key groundwater monitoring wells for analysis of physical constituents (e.g. temperature, electrical conductivity, turbidity, pH; general minerals, trace metals; and the radiological constituents is recommended. Mitigation Measure HYDRO-2: After data has been collected for each phase of development, the project applicant shall retain qualified groundwater professionals to evaluate water quality. Since pumping is conducted continuously and groundwater conditions change, due to external factors (such as changes in rainfall), this data will allow the proposed pumping	

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
production from these wells would be decreased for the remaining nine months of each year to satisfy the remaining annual demand of 160 AF. Under these conditions, the increased demand is only temporary, and following the summer period, recharge to the aquifer system will be at its highest during winter and spring months. As such, the shallow aquifer system is expected to be able to recover to pre-summer conditions. *Groundwater Quality* Limited data exists regarding the nature of current water quality in the shallow and deep aquifers beneath the property; however, it is clear that the water quality is appropriate for use as a source for bottled water, and nearby residents have been using groundwater from shallow and deep wells for their own private domestic use for many years. Based on the water quality and water level results generated during prior pumping tests of water wells on the project site, the saline groundwater within the fine-grained sediments located east of the Spring Line fault will not move west across or through the fault into the coarser-grained alluvial deposits that lie west of the fault. *Groundwater Storage and Recharge* Prior hydrogeologic studies estimated annual recharge volumes for the shallow aquifer to be 6,700 AFY and 7,500 AFY, respectively, for the shallow and deep	program to be modified to adjust to changes in conditions prior to increasing groundwater withdrawal to expand production. Examples of such data review and interpretation may include, but not be limited to, the following: • Plot the production quantities from each well, along with rainfall and SWLs, in order to assess the impact of pumping on SWLs in all monitored sites. • Changes in spring flow over time shall be plotted against total pumping of the three wells and changes in rainfall over time. • Plot temporal changes in key water quality constituents in groundwater samples from the wells. Typical key water quality constituents include total dissolved solids, electrical conductivity, color and selected cations and anions, such as calcium, magnesium, sodium and boron and bicarbonate, sulfate and chlorides. Tracking changes in these constituents in those wells close to the fault will provide indication of any possible intrusion of any water quality from the east side of the fault into the sediments on the west side.	

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
aquifers. The total amount of groundwater planned to be pumped from the three wells represents 31 percent of the total amount of groundwater currently in storage. However, the amount of groundwater pumped would be replenished by surface water recharging the alluvial aquifer system, and the planned amount of production will be readily replenished on an average annual basis by this recharge water. The off-site residential wells to the north in Cartago also obtain their water supply from the shallow aquifer system; however, the annual pumping volume of these is not expected to be significant (i.e., less than one AFY per well). In addition, the Cartago municipal wells were constructed with deeper perforations, and draw groundwater solely from the deeper aquifer system. As such, pumping of CGR-8, CGR-9, and CGR-10 for the proposed project is not expected to significantly impact these wells. *Groundwater Underflow and Impact of Pumping* The total amount of groundwater underflow in the shallow aquifer system through the entire area between the Spring Line fault southward through to a point located west of CGR-2, was calculated to range from approximately 1,600 AF per year to 1,850 AF per year. As such, the total amount of groundwater to		

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
be obtained from the shallow aquifer in the future, at full plant capacity for both the existing facility in Olancha and the proposed project, ranges from 38 percent to 43 percent of the total amount of shallow groundwater underflow estimated to occur in this area. However, operation of CGR-2 and CGR-7 appear to have little to no impact on the current groundwater conditions, since no long-term trend of lowered groundwater levels has been observed, and artesian conditions (i.e., flow at ground surface) are observed on the property after rainstorms. *Water Level Drawdown Impacts* A conservative simulation of the impact of pumping wells CGR-8, CGR-9 and CGR-10 on water levels in other monitoring wells and water supply wells, was performed on a continuous pumping rate of 75 gpm for each well, for a maximum period of 360 days. The results of the calculation of water level drawdown in the piezometers, monitoring wells and water supply wells perforated only in the shallow aquifer system, revealed that at the northern boundary of Cabin Bar Ranch, the maximum theoretical drawdown induced in a well at that location would be 0.87 foot, whereas near the southern boundary of the property, a maximum theoretical drawdown of 0.54 foot would take place.		

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
Surface Hydrology Construction The proposed project would not alter the existing drainage pattern of the site or alter the course of a stream or river in a manner which would result in erosion or siltation on- or off-site. Any impacts to surface drainage during project construction would be temporary in nature (approximately two months), and would be controlled by a LRWQCB-approved SWPPP. As such, construction-related impacts surface hydrology would be less than significant.	No mitigation required.	Less Than Significant
Operation Operation of the proposed project would create new impervious surfaces on relatively undeveloped, rural land, and there are currently no existing or planned stormwater drainage systems in Cartago. As described above, the stormwater detention basin would be designed to capture wastewater/process water and control stormwater flow patterns across the site, in accordance with LRWQCB standards. In addition, the stormwater detention basin would be designed so that no increase in stormwater flows is discharged off-site during project operation, as it would be protected by rip-rap or another material designed to eliminate the possibility of erosion at the detention basin outflow. As such,	No mitigation required.	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
operational impacts to surface hydrology would be less than significant.		
Otherwise Substantially Degrade Water Quality Construction Construction of the proposed project will not otherwise substantially degrade water quality. As described above, during construction, the proposed project will implement and be subject to the requirements of a LRWQCB-approved SWPPP. Approved BMPs will be will be utilized to effectively control degradation of water quality due to short-term construction activities. As such, construction-related impacts to water quality will be less than significant.	No mitigation required.	Less Than Significant
Operation Operation of the proposed project will not otherwise substantially degrade water quality. As described above, a leach mound system will be designed and permitted in accordance with Inyo County Environmental Health Department standards, and a stormwater detention basin will be designed and permitted in accordance with Inyo County Public Works Department and LRWQCB. With implementation of these proposed project features, water quality pollutants would be reduced or eliminated, and the project would comply with all applicable regulatory requirements. Therefore,	No mitigation required.	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
impacts associated with water quality would be less than significant.		
H. NOISE		
Construction Noise Construction noise levels are estimated to reach a maximum of 66 dBA at the nearest off-site receptor location, which would exceed the 60 dBA significance threshold contained in the County's General Plan Noise Element. Therefore, construction-period noise impacts at the nearest residential uses (R1) north of the project site would be significant without incorporation of mitigation measures.	Mitigation Measure NOISE-1: Noise-generating equipment operated at the project site shall be equipped with the most effective noise control devises, i.e., mufflers, lagging, and/or motor enclosures. All equipment shall be properly maintained to assure that no additional noise, due to worn or improperly maintained parts, would be generated. Mitigation Measure NOISE-2: A 15-foot-tall temporary noise barrier shall be provided along north boundary of the project site to block line-of-sight to the residential uses north of the project site.	Less Than Significant
Operational Noise The existing noise environment in the Project vicinity is dominated by traffic noise from nearby roadways, as well as nearby commercial and residential activities. Long-term operation of the Project would have a minimal effect on the noise environment in proximity to the Project Site. Noise generated by the project would result primarily from parking activities, normal operation of the bottling facility mechanical equipment, and off-site traffic. Since project-related operational noise would be well below the County Noise Element's significance threshold of 60 dBA at those residential uses, impacts on surrounding uses would be less than significant.	No mitigation required.	Less Than Significant

Table ES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Environmental Impacts	Mitigation Measures	Level of Significance
I. TRANSPORTATION		
Threshold 4.I-1: Would the proposed project cause an intersection or roadway segment within Inyo County to operate LOS C or lower?		
Threshold 4.I-2: Would the proposed project substantially increase hazards due to traffic volumes, a design feature (e.g., sharp curves or dangerous intersections), incompatible uses, or vehicles entering US 395.		
Threshold 4.I-1 The proposed project would not result in a significant impact because no intersection or roadway within Inyo County would operate at LOS C or lower as a result of the proposed project.		
Threshold 4.I-2 The proposed project would not substantially increase hazards due to traffic volumes, a design feature (e.g., sharp curves or dangerous intersections), incompatible uses, or vehicles entering US 395.		

1.0 INTRODUCTION

This document is a Draft Environmental Impact Report (Draft EIR) that has been prepared at the direction and under the supervision of the Inyo County Planning Department (the "County") in accordance with the California Environmental Quality Act (CEQA) and the Guidelines for California Environmental Quality Act (CEQA Guidelines), as amended.[1,2] and the County's CEQA Procedures (Inyo County Code Title 15). The proposed Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project (the "proposed project") would develop a spring water bottling facility and ancillary uses to be built in three phases over an approximate 10 to 15 year time period. The water bottling facility would include an approximately 198,500-square-foot bottling plant facility with four bottling lines and an approximately 40,000-square-foot storage warehouse. Proposed ancillary uses include rooftop solar array, a fire suppression building, a stormwater detention basin, a leach mound, a fire access road, and a parking and truck staging area. To provide adequate access from US 395 to the bottling facility, the project would remove the site's existing access road (i.e., Cabin Bar Ranch Road) and construct a new permanent access road approximately 2,500 feet to the south. The bottling facility would utilize spring water from three existing production wells to supply the bottling operations. The proposed project would also use a fourth existing well to provide domestic potable water to the water bottling facility's employees.

Cabin Bar Ranch, on which the project site would be located, is made up of 20 contiguous parcels and one non-contiguous parcel totaling approximately 420 acres adjacent to US 395, immediately south of the unincorporated town of Cartago, Inyo County, California. Approximately 34.41 acres of the 420-acre ranch property constitutes the proposed project site. Of the 34.41-acre project site, approximately 14.59 acres would be subject to ground disturbance and improvements associated with development of the proposed project. The remainder of the project site (19.82 acres) would not be developed.

To accommodate the proposed project, approximately 23.46 acres of the Cabin Bar Ranch property, including the area subject to disturbance and improvements, would be rezoned to the M-2 (Light Industrial) zoning designation. In association with this Zone Change, a General Plan amendment would be implemented to apply the Light Industrial General Plan land use designation to this 23.46-acre portion of Cabin Bar Ranch. The M-2 zone allows a bottling plant as a conditional use. Accordingly, a Conditional Use Permit (CUP) is being requested as part of the proposed project. The balance of the proposed project site, approximately 10.95 acres, would be zoned as OS-40 (Open Space, 40-Acre Minimum). The remainder of Cabin Bar Ranch, approximately 385 acres spanning both sides of US 395, would remain zoned OS-40 and no development is proposed.

1. PROJECT BACKGROUND

Prior to the mid-1990s, Cabin Bar Ranch was used as a cattle ranch. In 1982, the north-central portion of the ranch (approximately 12.43 acres) was subdivided into sixteen lots and zoned Rural Residential (RR) for the planned construction of single-family residential homes; however, only the access road (i.e., the existing

[1] *Public Resources Code Section 21000-21177.*

[2] *California Code of Regulations Title 14, Chapter 3, Section 15000-15387.*

Cabin Bar Ranch Road), a model home on one of the lots, and several concrete-lined decorative pond basins were constructed. No further development of the residential subdivision was completed. In 1993, Anheuser-Busch Companies, Inc. purchased Cabin Bar Ranch to secure additional groundwater for their brewing operations in Los Angeles.

Subsequent to this purchase, the Los Angeles Department of Water and Power (LADWP) prepared a July 1993 Draft EIR for the withdrawal of approximately 1,100 acre-feet of water per year (AFY) from a test well located on the non-contiguous parcel of Cabin Bar Ranch west of US 395. The water extracted from this well was to be conveyed via the Los Angeles Aqueduct (LAA) for eventual use in Anheuser-Busch's Los Angeles brewery. This Draft EIR was never approved and Anheuser-Busch and the LADWP abandoned efforts to develop the well west of US 395.

Around the time that Anheuser-Busch purchased Cabin Bar Ranch, Crystal Geyser Roxane (CGR) began expanding operations at its existing bottling facility in Olancha, approximately 0.75 miles south of Cabin Bar Ranch. Now fully built out, the existing Olancha bottling facility is supplied with spring water from wells located on the Olancha site and from four wells located on the Elton Lease Parcel, which is located between Crystal Geyser's existing Olancha bottling facility and Cabin Bar Ranch. CGR purchased Cabin Bar Ranch property in 2010 with the intent of augmenting its existing water bottling operations in Olancha. Subsequent to this purchase, several technical studies were completed to determine the viability of developing a water bottling facility on the ranch and to support the environmental analysis in the Draft EIR. These technical studies form the scientific basis of portions of the analysis contained in this Draft EIR, and can be found in **Appendices B** through **H** of this Draft EIR.

2. PURPOSE OF THE DRAFT EIR

This Draft EIR has been prepared in conformance with CEQA (California Public Resources Code Section 21000 et seq.), and the State *CEQA Guidelines* (California Code of Regulations, Title 14, Section 15000 et seq.). Pursuant to Section 15051, the Inyo County Planning Department is the Lead Agency under CEQA responsible for the preparation and distribution of the Draft EIR for the proposed project. The principal *CEQA Guidelines* sections governing content of this document are Sections 15120 through 15132 (Content of a Draft EIR).

In accordance with Section 15121 of the State *CEQA Guidelines*, a primary purpose of this EIR is to provide decision-makers and the public with specific information regarding the environmental effects associated with the proposed project, identify possible ways to minimize any significant effects, and describe reasonable alternatives to the project.

This Draft EIR will be used in connection with all other permits and all other approvals necessary for the construction and operation of the proposed project. The Inyo County Planning Department, which has the principal responsibility of processing and approving the project, will use and consider the substantial evidence in this EIR, along with other information that may be presented during the CEQA process, during the decision to approve, disapprove, or modify the proposed project. This Draft EIR will be used by the Inyo County Planning Department and other responsible public agencies that must approve activities undertaken with respect to the project.

This Draft EIR addresses the proposed water bottling operations proposed on the project site. As discussed in detail below, an Initial Study was prepared by the County to determine potentially significant impacts tht required further evaluation in an EIR. The full description of the proposed bottling operations, as presented

in **Section II,** *Project Description*, of this document, constitutes the "proposed project" for the purposes of this Draft EIR. This Draft EIR evaluates the environmental impacts determined by the County to be potentially significant in the project's Initial Study. This document analyzes the environmental effects of the proposed project to the degree of specificity appropriate to the current proposed actions, as required by Section 15146 of the State *CEQA Guidelines*. This analysis considers the actions associated with the proposed project, to determine the short-term and long-term effects associated with their implementation. This EIR discusses both the direct and indirect impacts of the proposed project, as well as the cumulative impacts associated with cumulative development. Cumulative development includes all anticipated future projects that, in conjunction with the proposed project, may result in a cumulative impact. In addition, this Draft EIR evaluates the extent to which environmental effects could be reduced or avoided through the implementation of feasible alternatives to the proposed project. CEQA requires the preparation of an objective, full disclosure document to inform agency decision makers and the general public of the direct and indirect environmental effects of the proposed action; provide mitigation measures to reduce or eliminate significant adverse effects; and identify and evaluate reasonable alternatives to the proposed project.

In accordance with the above, mitigation measures are provided which may be adopted as Conditions of Approval in order to reduce the significance of impacts resulting from the project. In addition, this EIR is the primary reference document in the formulation and implementation of a mitigation monitoring program for the proposed project. Significant environmental impacts cannot always be mitigated to a level considered less than significant; in those cases, impacts are considered significant and unavoidable. In accordance with Section 15093(b) of the State *CEQA Guidelines*, if a public agency approves a project that has significant impacts that are not substantially mitigated (i.e., significant unavoidable impacts), the agency shall state in writing the specific reasons for approving the project, based on the Final EIR and any other information in the public record for the project. This is termed, per Section 15093(b) of the State *CEQA Guidelines*, a "statement of overriding considerations."

3. COMPLIANCE WITH CEQA

The Draft EIR is subject to a 45-day review period by responsible and trustee agencies, members of the public and other interested parties. In accordance with the provision of Sections 15085(a) and 15087(a)(1) of the State *CEQA Guidelines*, the County, serving as the Lead Agency will: 1) publish a Notice of Availability of a Draft EIR, to be published in the newspaper of general circulation, which states that the Draft EIR will be available for review at: Inyo County Planning Department, located at 168 N. Edwards Street, Independence, California, and at six public libraries (i.e., Bishop Public Library, Big Pine Public Library, Independence Public Library, Lone Pine Public Library, Tecopa Public Library, Furnace Creek Public Library); 2) prepare and transmit a Notice of Completion (NOC) to the State Clearinghouse; and 3) send notices to the last known name and address of all organizations and individuals who have previously requested such notice in writing. In addition, the Draft EIR will be available in electronic form on the County Planning Department's website. Proof of publication is available at the County. All comments on the Draft EIR should be addressed to:

Ms. Tanda Gretz
Inyo County Planning Department
P.O. Drawer L
168 N. Edwards Street
Independence, CA 93526
Attn: Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Or via email at: tgretz@inyocounty.us

Any public agency or members of the public desiring to comment on the Draft EIR must submit their comments in writing to the individual identified on the document's NOC prior to the end of the public review period. Upon the close of the public review period, the Lead Agency (Inyo County) will then proceed to evaluate and prepare written responses to all relevant written comments received from both citizens and public agencies during the public review period. The County's responses at this point in the process will be limited to issues relating to the adequacy of the Draft EIR, and not the relative merits of the proposed project.

The Final EIR will consist of the Draft EIR, revisions to the Draft EIR, and responses to comments on the Draft EIR from responsible agencies or reviewing parties. After the Final EIR is completed and at least 10 days prior to its certification, a copy of the response to comments made by public agencies on the Draft EIR will be provided to the respective agencies.

4. EIR SCOPING PROCESS

In compliance with the State *CEQA Guidelines*, the County has provided opportunities for the public to participate in the environmental review process. Prior to preparation of the Draft EIR, an effort was made to contact various Federal, State, regional, and local government agencies and other interested parties to solicit comments and inform the public of the proposed project. This included, as further described below, the distribution of an Initial Study and Notice of Preparation (NOP).

a. Initial Study / Draft EIR Focus / Effects Found Not To Be Significant

The focus of the Draft EIR is on the analysis of impacts that are considered potentially significant. In accordance with Section 15063(b) of the State *CEQA Guidelines*, the County's Planning Department undertook the preparation of an Initial Study. The Initial Study determined that a number of environmental issue areas may be impacted by project implementation. As a result, the Initial Study determined that this Draft EIR should address the project's Potentially Significant Impacts on a variety of environmental issue areas. The NOP, Initial Study, and NOP comment letters are included within **Appendix A** of this Draft EIR. The Initial Study provides a detailed discussion of the potential environmental impact areas and the reasons that each topical area is or is not analyzed further in the Draft EIR.

This Draft EIR focuses primarily on changes in the environment that would result from the proposed project. The EIR analyses the environmental topic areas that were found by the Initial Study to result in Potentially Significant Impacts to the environment, either through the construction or operation of the proposed project, and provides measures to mitigate potential significant impacts. This Draft EIR addresses the project's potential impacts with respect to the following environmental topic areas:

- Aesthetics
- Air Quality
- Global Climate Change
- Biological Resources
- Cultural Resources
- Hydrogeology and Surface Hydrology
- Land Use/Planning
- Noise
- Transportation/Traffic

Based on the Initial Study findings, issues for which no impact or less than significant impacts are anticipated are discussed in **Section 6.0,** *Other Environmental Considerations***,** of this EIR.

b. Notice of Preparation

Pursuant to the provision of Section 15082 of the State *CEQA Guidelines*, the County's Planning Department circulated a NOP to public agencies, special districts, and members of the public for a 30-day period commencing September 20, 2011, and ending October 20, 2011. The purpose of the NOP was to formally communicate that the County Planning Department was preparing a Draft EIR for the proposed project. As mentioned above, the NOP, Initial Study, Scoping Meeting presentation, a summary of the Scoping Meeting oral comments, and NOP comment letters are provided in **Appendix A** of this Draft EIR.

c. NOP and Scoping Results

The NOP/Initial Study was distributed for 30 days to various public agencies in order to receive input as to the scope and content of the environmental information to be provided in this EIR. The County advertised a public Scoping Meeting in association with publication and distribution of the NOP. The meeting was held on September 29, 2011, in the Olancha School Multi-Purpose Room located at 123 School Avenue in Olancha. The meeting was held to provide interested individuals/groups and public agencies the opportunity to provide input to the Lead Agency in determining the scope and focus of the EIR as described in the NOP and Initial Study. In an effort to ensure comments were accurately recorded, the County allowed comments to be submitted orally or in writing by either completing a comment form available at the meeting or providing written comments by mail, fax or via e-mail. Issues raised in oral comments were also recorded at the meeting. Comments were received from the California Department of Transportation, the California Department of Fish and Game, the California Department of Public Health, the Native American Heritage Commission, the Big Pine Paiute Tribe, the Lahontan Regional Water Quality Control Board, and the Cartago Mutual Water Company. In addition, approximately nine members of the general public provided comments on the scope and content of the EIR. The NOP comment letters and a summary of the oral comments provided at the Scoping Meeting are contained in **Appendix A** of this Draft EIR, and the issues raised in public comments are summarized in the *Executive Summary*, under the "Areas of Controversy/Issues to be Resolved" subheading.

5. FORMAT OF THE EIR

The EIR includes eight sections as well as technical appendices, which are organized as follows:

Executive Summary. This section presents a summary of the proposed project and alternatives, potential impacts and mitigation measures, and impact conclusions regarding significant unavoidable adverse impacts and effects not found to be significant.

1.0 Introduction. This section provides: background information on the proposed project; describes the purpose of the EIR; provides CEQA compliance information relative to the proposed project and the EIR; provides a brief overview of the environmental review process; identifies areas of controversy and issues to be resolved in the EIR; and outlines the organization of the EIR.

2.0 Project Description. Describes the project location, project details, the County's overall objectives for the proposed project, and agency permitting for the proposed project.

3.0 General Description of Environmental Setting. This section contains a description of the existing natural and built environments, and background information used to evaluate cumulative impacts including past, present, and reasonably anticipated future projects to be built in the project area.

4.0 Environmental Impact Analysis. This section contains the environmental setting, proposed project and cumulative impact analyses, mitigation measures, and conclusions regarding the level of significance after mitigation for each of the following environmental issues: (A) Aesthetics Resources, (B) Air Quality, (C) Biological Resources, (D) Cultural Resources, (E) Greenhouse Gas Emissions, (F) Hydrogeology/Water Quality, (G) Land Use/Planning, (H) Noise, and (I) Transportation/Traffic.

5.0 Alternatives. This section evaluates the environmental effects of the project alternatives, including the No Project Alternative. It also identifies the environmentally superior alternative.

6.0 Other Environmental Considerations. This section includes a discussion of issues required by CEQA that are not covered in other chapters. This includes the following:

- Significant Irreversible Changes;
- Growth-Inducing Impacts;
- Effects Found Not To Be Significant;
- Potential Secondary Effects;
- Significant Unavoidable Impacts;
- Reasons Why the Project Is Being Proposed, Notwithstanding Significant Unavoidable Impacts; and
- Potential Secondary Effects

7.0 Document Preparation and References. This section lists all of the persons, public agencies, and organizations that were consulted or contributed to the preparation of this EIR, as well as all the references and sources used in the preparation of the document.

This EIR includes the environmental analysis prepared for the project and appendices as follows:

- Appendix A – Initial Study, Notice of Preparation (NOP), Scoping Meeting Materials, and NOP Comment Letters
- Appendix B – Air Quality Technical Data
- Appendix C – Biological Resources
- Appendix D – Archaeological and Paleontological Resources Assessment
- Appendix E – Historical Resources Assessment
- Appendix F – Hydrogeologic Evaluation
- Appendix G – Noise Technical Data
- Appendix H – Traffic Impact Analysis

2.0 PROJECT DESCRIPTION

1. INTRODUCTION

The project applicant, Crystal Geyser Roxane (CGR), is proposing the Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project ("proposed project" or "project"). The proposed project would involve the construction of a spring water bottling facility and ancillary uses on the Cabin Bar Ranch, and would withdrawal groundwater from on-site wells for the purpose. Cabin Bar Ranch spans US 395 and encompasses 20 contiguous parcels on the east side of the highway and one parcel on the west side, totaling 420 acres. Approximately 34.41 acres or eight percent of the Cabin Bar Ranch property constitutes the proposed project site. Of this, approximately 14.59 acres would be subject to ground disturbance and improvements associated with development of the proposed bottling facility and ancillary uses.

The water bottling facility would include an approximately 198,500-square-foot bottling plant and an approximately 40,000-square-foot storage warehouse. Proposed ancillary uses include a rooftop solar photovoltaic array, fire suppression building, stormwater detention basin, leach mound, fire access road, and parking and truck staging area. To provide adequate access from US 395 to the bottling facility, the project would remove the existing access road (i.e., Cabin Bar Ranch Road) and construct a new permanent access road approximately 2,500 feet to the south. The bottling facility would withdrawal water from three existing production wells in the central portion of the Cabin Bar Ranch property; the wells were drilled in 2010 to determine hydrogeologic conditions and the feasibility of the proposed project, but have never been pumped to provide groundwater for commercial or domestic use. Groundwater would be pumped from a fourth existing well on Cabin Bar Ranch to provide domestic potable water to the water bottling facility. The proposed project would be constructed in three phases over a several-year period following project approval.

Cabin Bar Ranch was operated as a cattle ranch starting in the 1860s and also supported alfalfa production starting in the 1970s. In 1982, a 17.90-acre area in the north-central portion of the ranch was subdivided into 16 lots for the planned construction of single-family homes; only one of the lots was ultimately developed and the remainder of the subdivision was unrealized. The ranch was purchased by CGR in 2010 for implementation of the proposed spring water bottling facility project.

The majority of the ranch, approximately 402 acres, is currently zoned OS-40 (Open Space, 40-Acre Minimum), with the undeveloped 17.90-acre subdivision zoned RR-1.0 (Rural Residential, one-acre minimum). The 34.41-acre project site is proposed as a single parcel to be created from the overall 420-acre ranch through a lot line adjustment and merger of 16 lots from the undeveloped subdivision. Approximately 23.46 acres of the proposed project site, including 11.04 acres currently zoned RR-1.0 and 12.42 acres currently zoned OS-40, would be rezoned M-2 (Light Industrial), with a Conditional Use Permit (CUP) to allow for the specific use of a bottling plant. A General Plan amendment is also requested to apply the Light Industrial (LI) land use designation to this portion of the proposed project site.

The balance of the proposed project site, approximately 10.95 acres, would be zoned as Open Space (OS-40), including 6.86 acres currently zoned RR-1.0 in the undeveloped subdivision and 4.09 acres already zoned

OS-40. The remainder of Cabin Bar Ranch, approximately 385 acres spanning both sides of US 395, would remain zoned as Open Space (OS-40) and no development is proposed therein.

2. STATEMENT OF PROJECT OBJECTIVES

Section 15124(b) of the CEQA *Guidelines* states that the Project Description shall contain "a statement of the objectives sought by the proposed project" and that this statement of objectives should include "the underlying purpose of the project". As set forth by the *CEQA Guidelines*, the list of objectives that the Applicant seeks to achieve for the proposed project are as follows:

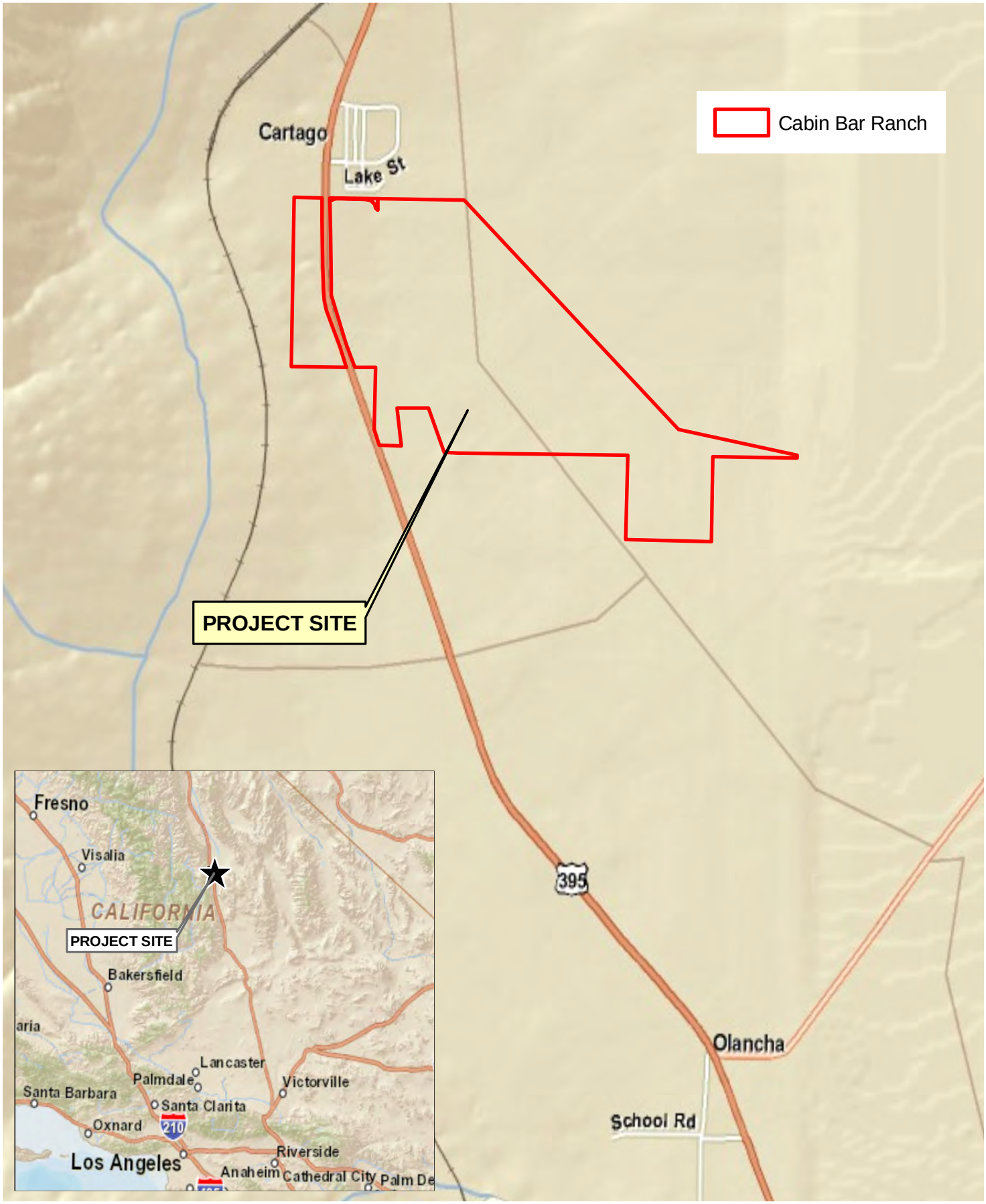
- To construct and operate a new spring water bottling facility and ancillary uses to meet increasing market demand for Crystal Geyser Roxane bottled spring water.
- To site the proposed facility within Cabin Bar Ranch, to take advantage of the availability and high quality of existing spring water on the property which meets the regulations of the US Food and Drug Administration Agriculture and the California State Department of Public Health governing bottled water product quality.
- To site the new bottling facility in proximity to the existing bottling facility, to realize economic and environmental efficiencies through shared use of raw materials for packaging, transportation of finished products, management, and other inputs required for Crystal Geyser Roxane's operations.
- To construct the new water bottling facility in a manner that incorporates sustainable building and design practices, recycling efforts and other conservation methods, in order to reduce energy consumption and greenhouse gas emissions. To withdrawal groundwater in a sustainable manner that does not result in negative effects to nearby springs or wells, the underlying shallow or deep aquifers, or the surrounding environment.
- To construct a rooftop solar photovoltaic array as part of the water bottling facility prior to completion of full project buildout, to further reduce electricity consumption by the new water bottling facility.
- To create new employment opportunities for the local and nearby communities, promote sustainable economic development, provide for adequate services and infrastructure to support the project, and contribute to the County's tax base.

3. SURROUNDING USES AND PROJECT SITE

a. Surrounding Land Uses

Cabin Bar Ranch is located just south of the unincorporated community of Cartago in Inyo County, California, 14 miles southwest of Keeler and 20 miles south of Lone Pine, as shown in **Figure 2-1**, Regional and Local Vicinity Map. Cartago, Olancha and Lone Pine are bisected by US 395, and Keeler sits on the northeastern edge of Owens Dry Lake along State Route 136. The area surrounding Cabin Bar Ranch is predominantly rural, except for low-density residential and commercial development in the town of Cartago immediately north of the project site, and CGR's existing Olancha bottling plant operation located to the south of the property.

The unincorporated community of Cartago has a population of approximately 92 residents and contains a mix of rural single-family residential homes and mobile homes, limited low-density commercial



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Regional Location and Project Vicinity Map

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: ESRI Street Map, 2009; PCR Services Corporation, 2011.

FIGURE

2-1

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development, and the remnants of a soda ash processing plant that ceased operations in the 1930s.[1,2] Cartago is approximately 1.5 square miles in size and sits at an elevation of approximately 3,600 feet above mean sea level (msl). With the exception of several parcels adjacent to US 395 that are zoned C-2 (Highway Services and Tourist Commercial), the majority of Cartago is zoned RMH (Single Residence and Mobile Home Combined District), which is intended to protect established neighborhoods of one-family dwellings (including mobile homes) and to provide space in suitable locations for additional development of this kind, with appropriate community facilities.

Cabin Bar Ranch is bordered on the east by the shoreline of Owens Dry Lake, which has largely dried up as a result of historical water conveyance from the Owens River through the Los Angeles Aqueduct. However, the lake's southwestern shoreline, near the project site, contains stands of vegetation and shallow ponds that support wildlife. For example, the CDFG Cartago Wildlife Area is located just northeast of the project site, immediately east of the soda ash processing plant remnants, where old dikes extend into Owens Dry Lake, encircling ponds once used as soda evaporators.[3] The Cartago Wildlife Area contains 218 acres of fresh water, in the form of wetlands and springs, providing habitat for water fowl, wading birds and shorebirds, including Western Snowy plovers, White-faced ibis and rails. Snowy plovers nest in the former soda evaporators. In addition to providing habitat, the area provides opportunities for bird watching, photography, and hunting of non-protected water fowl, dove, quail, and rabbits. Owens Dry Lake has been designated a Nationally Significant Important Bird Area by the National Audubon Society and America Bird Conservancy.

Cabin Bar Ranch is bordered on the south by undeveloped, privately owned land known as the Elton Lease Parcel, and the parcel immediately south this parcel is developed with CGR's existing spring water bottling plant in the unincorporated community of Olancha, approximately 0.75 miles south of the project site. Water rights associated with the Elton Lease Parcel are leased to CGR and four on-site wells (CGR-2, CGR-3, CGR-4, and CGR-7) and associated piping supply CGR's Olancha bottling facility. Well EW-4 is also currently pumped; the remaining wells on the Elton Lease Parcel are unused. All other structures were removed from the Elton Lease Parcel as part of the conditions of the CGR lease to avoid potential groundwater contamination.

Located to the west of the project site, across US 395, is the undeveloped portion of Cabin Bar Ranch, a Southern Pacific Railroad easement, the Los Angeles Aqueduct, and the eastern escarpment of the Sierra Nevada Mountain Range, the base of which is approximately one mile west of Cabin Bar Ranch.

As shown in **Figure 2-2**, *Aerial Photograph*, the project site is located in a relatively flat, rural area, with the major landscape features including open space, Cartago to the north of the project site, US 395, and Owens Dry Lake. **Figure 2-3**, *Existing Site Conditions*, shows buildings, structures, easement, and other features on

[1] *US Census Bureau, Census 2010 Demographic Profile, Cartago CDP, California, Factsheet, American Factfinder 2, http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml, accessed July 2011.*

[2] *A Brief History of Owens Lake Mineral Production, by Walt Margeram. http://www.cars.com/pages/mining.html, accessed April 2011.*

[3] *California Department of Fish and Game, Cartago Wildlife Area, Inyo County. http://www.dfg.ca.gov/lands/wa/region6/.html, accessed March 2011.*

the project site. **Figure 2-4**, *Project Site Plan*, illustrates the proposed project site boundary and improvements.

b. Project Site

Cabin Bar Ranch sits at an elevation of approximately 3,600 feet above msl. The site is generally flat with a slope of three to four percent in the western portion of the property, flattening out to one to two percent in the eastern portion, adjacent to Owens Dry Lake. Cartago Creek, an intermittent creek fed by winter snowmelt and summer storm events, flows west from the base of the Sierras across the ranch, approximately 1,000 feet south of the northern property line. Nine known springs are located on the ranch, their locations indicated by the presence of a former irrigation ditch that runs parallel to US 395 south of Cartago Creek, approximately 550 feet east of the roadway.

Previous uses on Cabin Bar Ranch include cattle ranching and agricultural operations and an undeveloped 12.43-acre subdivision. Existing buildings and structures on the ranch include two vacant single-family homes, a former model home and several concrete ponds built as part of the unrealized residential development, a mobile home currently occupied by a caretaker, and a barn/former metalworking shop. The former model home is currently maintained by CGR and used by visiting CGR employees for short stays. Other on-site improvements include a man-made irrigation pond, two fenced pasture areas, and Cabin Bar Ranch Road, a paved road along the northern property line that currently serves as the primary access to the project site from US 395. Constructed as part of the proposed residential subdivision, the road terminates in a cul-de-sac within the undeveloped 12.43-acre subdivision.

Utilities, including wastewater, water supply, and telephone lines, were installed beneath Cabin Bar Ranch Road at the time of its construction, but the wastewater and water supply lines were never activated and are not currently in use. The former model home is currently served by a septic system and electricity is provided via an above-ground LADWP power line originating east of the project site. Four existing wells are also located on the portion of Cabin Bar Ranch east of US 395, including three production wells and one domestic well. The production wells (CBR-8, CBR-9, and CBR-10) were drilled by CGR and are located roughly in the center of the ranch. The domestic well (CBR-1), located west of the man-made irrigation pond, was drilled in the 1980s to provide domestic water for the proposed residential subdivision. An underground water line connects CBR-1 to the existing model home.

Large areas of the ranch east of US 395 were once irrigated to support grasses for cattle grazing, using a surface sprinkler irrigation system fed by a pump located in the man-made irrigation pond, except near the shoreline of Owens Dry Lake, where the property was flood-irrigated by on-site springs. The irrigation system is no longer active and the remainder of Cabin Bar Ranch on both sides of US 395 is now dominated by sagebrush scrub; there are also localized areas of riparian vegetation near springs and along Cartago Creek, alkaline areas near the Owens Dry Lake shoreline that support no vegetation, and unimproved roadways remaining from cattle ranching operations. Several wells drilled at different times are also located on the ranch west of US 395. The ranch is enclosed with barbed-wire fence along its perimeter.

c. Land Use and Zoning Designations

The majority of Cabin Bar Ranch, approximately 407 acres, is designated for Rural Protection (RP) land uses and zoned OS-40 (Open Space, 40-acre minimum). The principal permitted uses in the OS-40 zone are a

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Aerial Photograph

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: ESRI, 2011; PCR Services Corporation, 2011.

FIGURE

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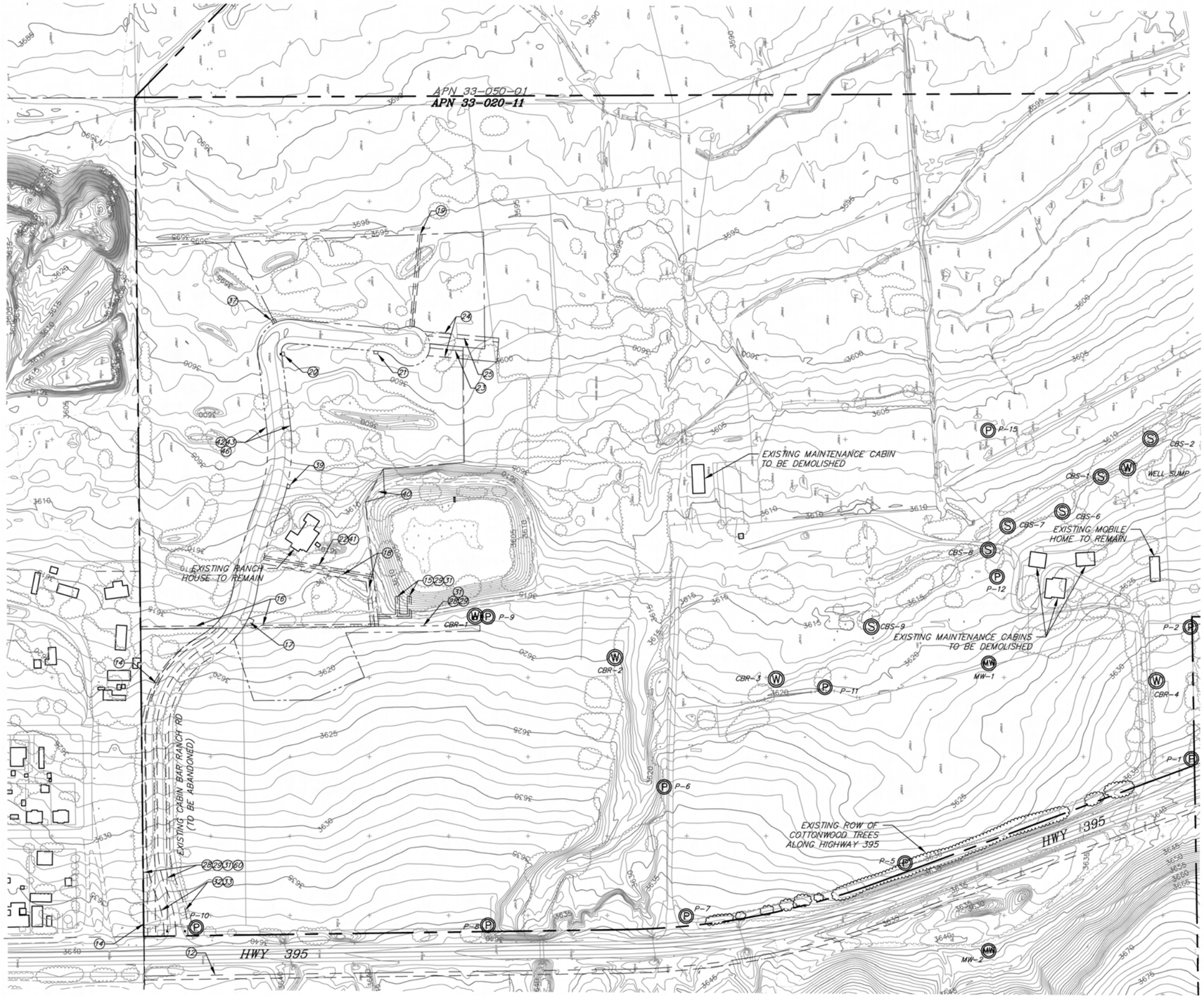

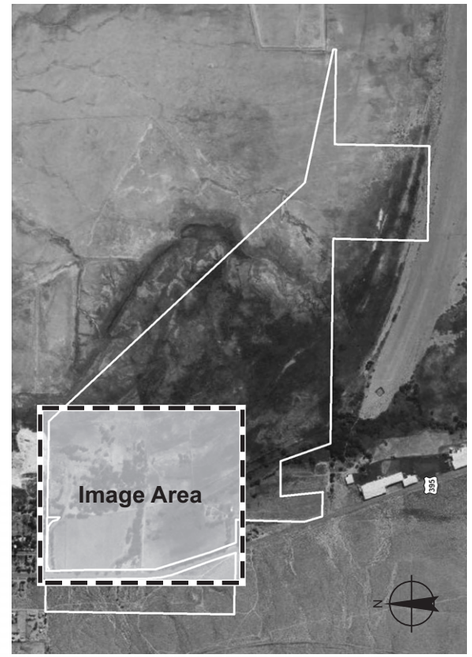

LEGEND

- PROPERTY LINE
- 3630 EXISTING GROUND CONTOUR & ELEV.
- (W) EXISTING DOMESTIC WATER PRODUCTION WELL
- (P) EXISTING PIEZOMETER
- (MW) EXISTING MONITORING WELL
- (S) EXISTING SPRING

NOTE: NO OTHER STRUCTURES EXIST ON REMAINING PROPERTY NOT SHOWN

EASEMENTS

REF PRELIM TITLE REPORT #52065 3/25/10

EXCEPTION#	PURPOSE	RECORD/INFO
7	HWY 395	50/94 O.R.
12	UG TELE LINES	231/485 O.R.
14	UG TELE LINES	82/1327 O.R.
15	WATERLINE/PUMP	MB 4/5
16	PUBLIC UTIL	MB 4/5
17	SEWER ESMT	MB 4/5
18	WATER/FIRE LINE	MB 4/5
19	DRAINAGE	MB 4/5
20	DWP	MB 4/5
21	DWP-PUBLIC UTIL	MB 4/5
22	WATER LINE	MB 4/5
23	SEWER LINE	MB 4/5
24	FUTURE STREET	MB 4/5
25	P.U.E.	MB 4/5
27	WATER FACILITIES	82/1422 O.R.
28	WATER FACILITIES	82/1458 O.R.
29	WATER/SEWER SYSTEMS	82/4261 O.R.
31	WATER FACILITIES	82/4262 O.R.
32	INGRESS/EGRESS	82/5147 O.R.
33	INGRESS/EGRESS	82/5149 O.R.
37	SEWER PUMP STATION	82/5291 O.R.
39	PUBLIC UTIL	MB 4/5
40	WATER RESERVOIR	82/3800 O.R.
41	WATER LINE	MB 4/5
42	TELE/COMMUNICATION	82/5146 O.R.
43	POLES/CONDUITS	82/5129 O.R.
46	CABIN BAR RANCH RD	MB 4/5
60	STREET	82/1324 O.R.

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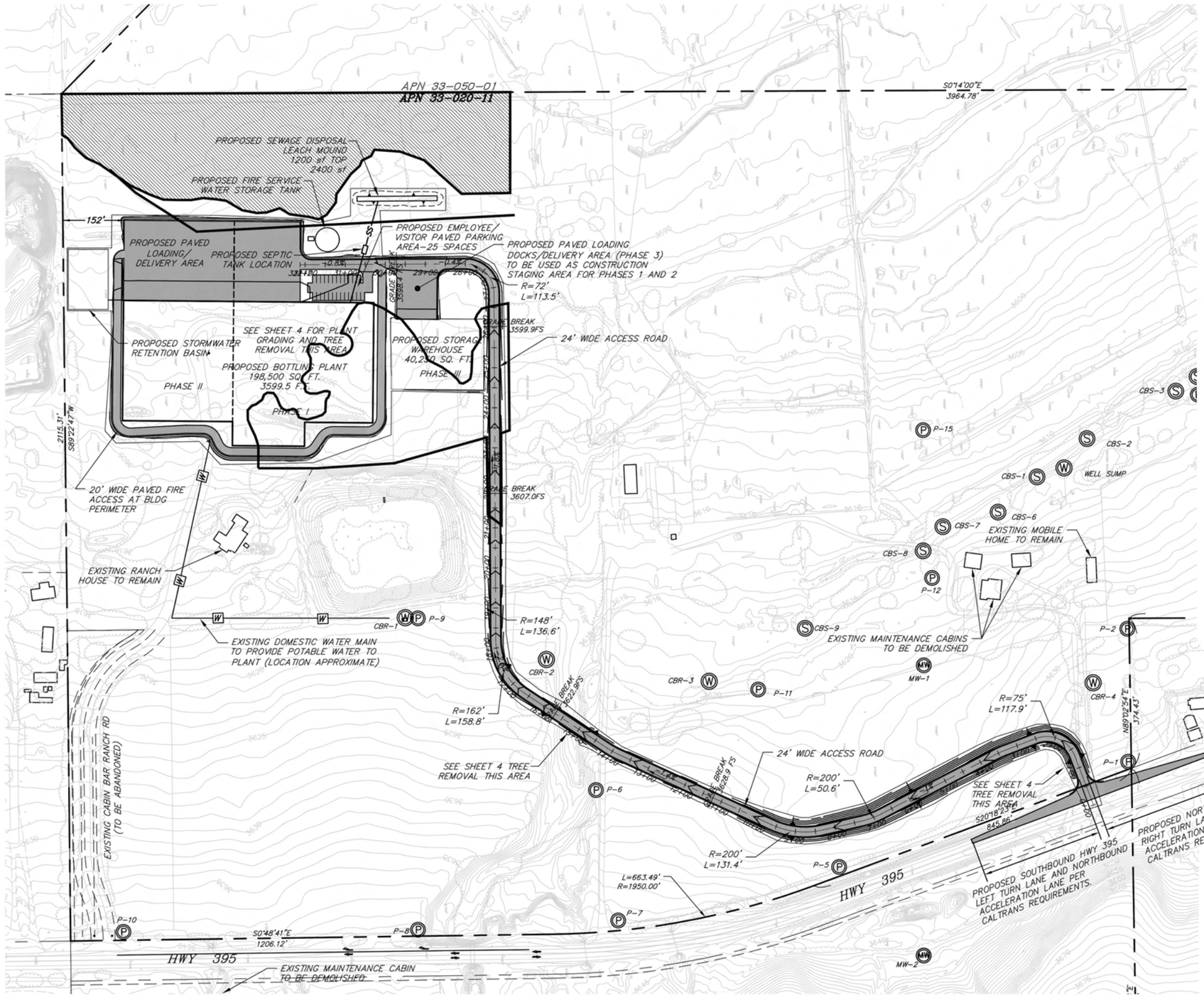
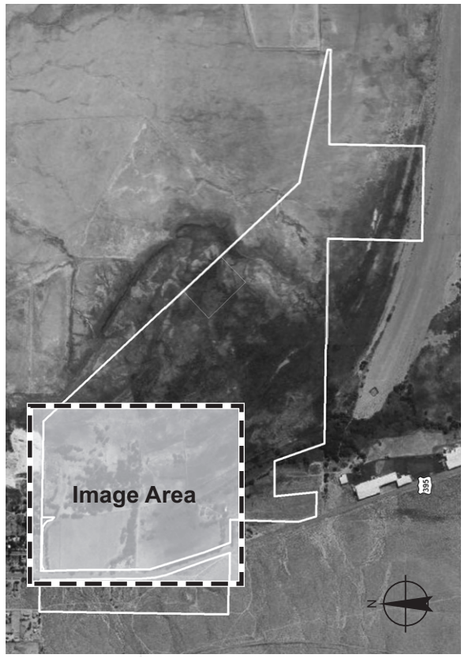
Existing Site Conditions

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: Triad/Holmes Associates, 2011.

FIGURE **2-3**





LEGEND

- PROPERTY LINE
- 3630 — EXISTING GROUND CONTOUR & ELEV.
- 3630 — PROPOSED FINISHED GROUND CONTOUR & ELEV.
- SD — PROPOSED STORMDRAIN LINE
- SS — PROPOSED SANITARY SEWER LINE
- W — EXISTING/PROPOSED WATER MAIN
- PROPOSED 2:1 FILL SLOPE
- PROPOSED 2:1 CUT SLOPE
- PROPOSED A.C. PAVEMENT
- (W) EXISTING DOMESTIC WATER PRODUCTION WELL
- (P) EXISTING PIEZOMETER
- (MW) EXISTING MONITORING WELL
- (S) EXISTING SPRING

SITE COVERAGE

SITE AREA:	420.02 ac.
BUILDING FOOTPRINT (I & III)	238,750 sq.ft.
FIRE STORAGE TANK & BLDG	2,980 sq.ft.
AC PAVEMENT:	
PARKING/BLDG FIRE RD	149,115 sq.ft.
FUTURE ROAD	77,270 sq.ft.
TEMPORARY ROAD	29,302 sq.ft.
DIRT ACCESS ROAD	39,263 sq. ft.
TOTAL SITE COVERAGE:	536,680 sq.ft. (2.9%)
EXISTING IMPERVIOUS AREA:	13,280 sq.ft. (bldgs) 56,211 sq.ft. (cabin bar rd.)

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Project Site Plan

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: Triad/Holmes Associates, 2012.

FIGURE **2-4**

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single-family dwelling, farms and ranches for orchards, livestock ranches for raising and grazing animals, animal hospitals and kennels, wildlife refuges and hunting or fishing preserves, and wilderness areas.[4]

A 17.90-acre area in the north-central portion of Cabin Bar Ranch was previously subdivided into 16 lots and designated for Rural Residential High Density (RRH) land uses and zoned RR-1.0 (Rural Residential, one-acre minimum) to permit the development of single-family homes. The principal permitted uses in a Rural Residential zone are single-family dwelling units, including single-family mobile homes, and orchards, vegetable crops, nurseries and gardens.[5] Bottling facilities are not a permitted use in the OS-40 or RR-1.0 zones.

The proposed project seeks a General Plan Amendment to redesignate 23.46 acres of the proposed project site as LI (Light Industrial) and a Zone Change to M-2 (Light Industrial), which allows a bottling plant as a conditional use.[6] This includes former residential subdivision lots currently zoned RR-1.0 and totaling 11.04 acres plus 12.42 acres currently zoned OS-40. The RR-1.0 lots would be merged or extinguished as part of the proposed project, likely through a Reversion to Acreage process or lot merger process and road abandonment.

The balance of the project site is approximately 10.95 acres and is intended to be designated for RP uses and zoned OS-40. This includes all or portions of several lots in the former subdivision currently designated as RRH and zoned RR-1.0 and totaling 6.86 acres, plus 4.09 acres already zoned OS-40. The proposed project therefore seeks a General Plan Amendment for redesignation of the 6.86-acre RRH portion as RP and a Zone Change from RR-1.0 to OS-40. The RR-1.0 lots would be merged or extinguished as part of the proposed project, likely through a Reversion to Acreage process or lot merger process and road abandonment.

4. PROPOSED PROJECT

As discussed above, the proposed project would include a proposed water bottling facility and ancillary uses. The water bottling facility would include an approximately 198,500-square-foot spring water bottling plant and an approximately 40,000-square foot storage warehouse. Ancillary uses to the bottling facility would include a rooftop solar photovoltaic array, a fire suppression building, a proposed stormwater detention basin, a leach mound, a fire access road encircling the bottling facility, and a parking and truck staging area. Additionally, a new permanent access road from US 395 would be constructed approximately 2,500 feet south of the existing Cabin Bar Ranch Road. The existing model home would be retained as part of the project.

The majority of the proposed project (i.e., proposed spring water bottling facility, warehouse, parking and truck staging area, and fire suppression building) would be constructed largely within the previously subdivided area of Cabin Bar Ranch.

[4] *Inyo County Code, Title 18, Chapter 18.12.*

[5] *Inyo County Code, Title 18, Chapter 18.21.020.*

[6] *Ibid, at Chapter 18.56.040.*

a. Spring Water Bottling Facility and Storage Warehouse

The proposed project would construct a 198,500-square-foot spring water bottling plant and a 40,000-square-foot storage warehouse. The bottling facility would be constructed in two phases and the warehouse as the third phase. Phase I would involve construction of an approximately 106,500-square-foot portion of the bottling facility that would house two of the four total proposed bottling lines, as well as four truck loading docks. Initially, only one bottling line would be built in this phase of the facility; when market demand warrants, the second bottling line would be constructed. The Phase I portion of the bottling facility would be centrally located within the project site. Other features that would be developed during Phase I include a new permanent access road from US 395, a fire suppression building, all on-site underground water lines serving the bottling operations, a stormwater detention basin, a leach mound system, fire hydrants, and a fire access road. Additionally, the two existing vacant single-family homes would be removed during Phase I.

Phase II of the project would involve construction of a 92,000-square-foot addition to the northern elevation of the Phase I bottling facility. The Phase II addition would house the remaining two bottling lines and four additional truck loading docks. The total size of the bottling facility following the Phase II addition would be 198,500 square feet, as shown in Figure 2-4, above.

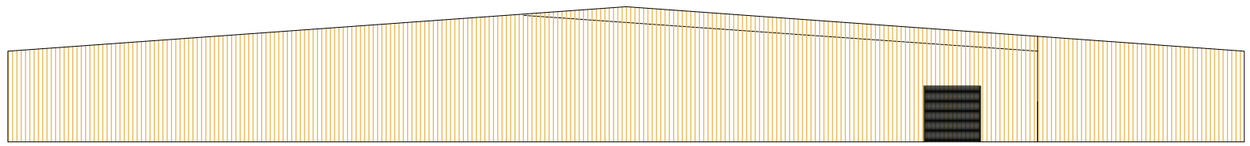
The 40,000-square-foot warehouse would be constructed under Phase III of the project and would be used to store bottled water until it could be delivered to market. The warehouse would be located south of the bottling facility, across the proposed fire access road. Alternatively, the warehouse may also be developed as a Phase II improvement if additional warehouse space is needed at that time (i.e., prior to the 92,000 sq.ft. addition to the bottling plant facility).

The design of the buildings would be similar to that of the nearby CGR bottling facility in Olancha, with the exception that the proposed facility would be further from US 395 and would be more screened from view by existing vegetation. The proposed bottling facility would be located approximately 1,200 feet from the US 395 roadway, whereas the existing Olancha plant is immediately adjacent to US 395. The proposed buildings would be metal-framed with an exterior metal siding painted in a color intended to blend with the landscape. As shown in **Figure 2-5**, *Exterior Elevations*, the proposed buildings would reach a maximum height of approximately 39 feet above grade. As also shown therein, all truck loading docks would be located along the east elevation of the bottling facility, facing Owens Dry Lake. The proposed truck loading area and parking areas would be immediately adjacent to the east side of the bottling facility and warehouse. The separate fire suppression building would be located east across the parking lot from the Phase I portion of the bottling facility.

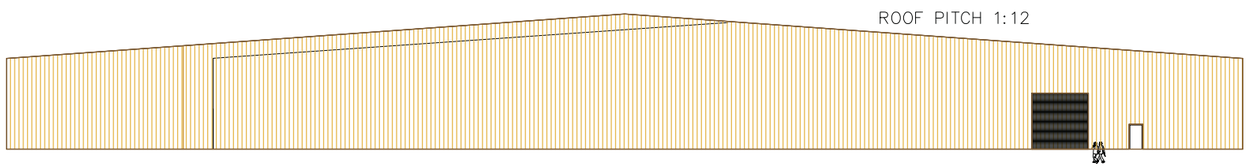
The bottling facility would also include exterior cooling equipment to ensure successful operation of the plant's interior machinery (i.e., the bottling lines). This cooling equipment is anticipated to include two cooling towers and two Trane® chillers. One cooling tower and one Trane® chiller would be installed when the first bottling line is installed, and the second cooling tower and Trane® chiller would be installed when the third bottling line is added, as part of Phase II of construction. The equipment would be located near the southeastern corner of the bottling facility.

b. Project Water Supply and Operations

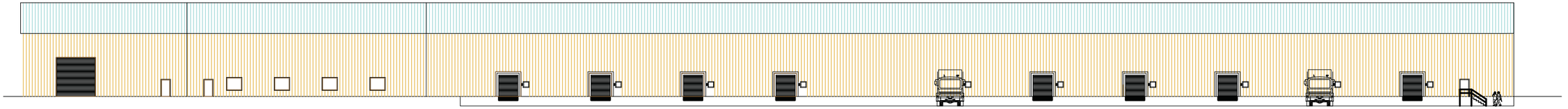
The bottling facility would use spring water from three existing production wells located in the central portion of Cabin Bar Ranch. These three wells were drilled and tested in 2010 to determine if the underlying



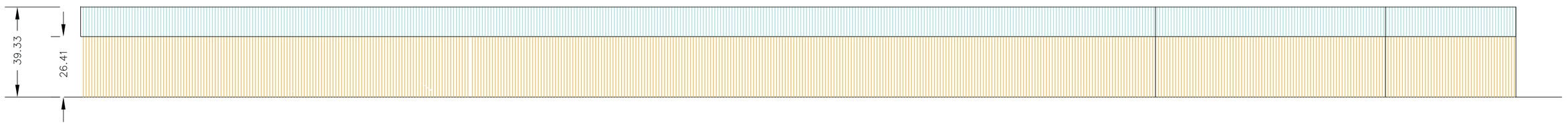
NORTH SIDE



SOUTH SIDE



EAST SIDE



WEST SIDE

PCR

0 45 Feet

Exterior Elevations

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: Triad/Holmes Associates, 2011.

FIGURE **2-5**

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groundwater aquifer could support the bottling plant as proposed.[7] As shown in Figure II-4, previously referenced, the proposed production wells are designated as CGR-8, CGR-9 and CGR-10. These wells withdrawal water from the shallow aquifer system that underlies Cabin Bar Ranch and the surrounding area, to an approximate depth of 80 feet below ground surface. The shallow aquifer system is hydrologically connected to a line of natural springs that mark the presence of a fault line, known as the Spring Line fault, which crosses the ranch in the vicinity of the proposed project site.

The project would also use a fourth existing well designated as CBR-1 to provide domestic potable water to the water bottling facility and to the caretaker's residence located west of the proposed bottling facility. Since this well would be used for domestic purposes and would not be a production well supplying commercial bottled water operations, it is considered a public water system under California law.[8] Well CBR-1 also withdrawals water from the shallow aquifer underlying Cabin Bar Ranch and the surrounding area.

No additional wells would need to be drilled and no other existing wells would be pumped to support the water production needs of the project. The proposed project would construct underground water lines between the production wells to the bottling facility. Two existing unoccupied single-family residences on the project site would be demolished to prevent possible contamination of the shallow aquifer system.

During the majority of the year, bottling would be rotated through the four bottling lines, such that all four bottling lines would not be operating simultaneously. However, during peak water demand (e.g., summer) all four bottling lines could be operating simultaneously. At such times, the project would have a peak water demand of up to 500 gallons per minute (gpm) from the on-site production wells. At project buildout, the annual water demand is estimated to be approximately 360 acre-feet per year (afy).

At full build-out, the CGR water bottling facility is expected to employ up to 50 people. The proposed hours of operation would vary according to seasonal production demand. At first, plant operation would require 35 employees in two shifts, typically from 7:00 am to 11:00 pm. This employment scenario would also be the case during the fall and winter months at project build-out. Following project build-out, in the spring and summer months the facility would require all 50 employees to operate the plant. These employees would be spread out between three shifts, 24-hours per day, so that there would typically be only 17 employees on-site at any one time. This does not include truck drivers and delivery vehicle drivers (e.g., FedEx, UPS) who would temporarily be at the site to haul water and deliver supplies. The bottling plant would not operate on weekends.

c. Vehicle Access and Parking

Development of the proposed bottling facility would require a permanent new 24-foot-wide access road into the site from US 395. This new roadway would be located approximately 2,500 feet south of the existing Cabin Bar Ranch Road. The California Department of Transportation (Caltrans), in coordination with the Inyo County Local Transportation Commission (LTC), is proposing to widen approximately 12.7 miles of US

[7] *Test Well Installation and Hydrology: Cabin Bar Ranch, U.S. Highway 395, Olancha, California. Prepared by Geosyntec Consultants, February 2012.*

[8] *A public water system is defined by Inyo County Environmental Health Services Department as one that regularly serves at least twenty-five individuals on a regular basis for at least sixty days out of the year, Inyo County Code Section 7.52.090.*

395 within the vicinity of Olancha and Cartago. On June 29, 2011, Caltrans announced a preferred alignment for this widening project, which would result in a four-lane, controlled-access, divided expressway that would begin south of Olancha and pass west of the existing US 395 alignment, Olancha, and the Los Angeles Aqueduct. Once the alignment crosses Olancha Creek, the preferred alternative would then cross the Los Angeles Aqueduct and continue north through Cartago along the existing US 395 alignment to meet up with the previously constructed Ash Creek Four Lane Project. The existing US 395 alignment adjacent to Cabin Bar Ranch would become a frontage road to the new US 395 alignment. Construction of the highway widening and realignment project is anticipated to begin in 2016.

Since the proposed project's new access road would be constructed approximately four years prior to the planned improvements to US 395, proposed project improvements along US 395 would conform to Caltrans standards based on the current configuration of US 395. Accordingly, project-related improvements to US 395 would include the appropriate acceleration and deceleration lanes, as well as turning lanes, on both the northbound and southbound side of US 395. The on-site access road would be approximately 3,100 feet in length and would cross the site in a northeastern direction from US 395 towards the proposed bottling facility. When the Caltrans project is completed, the proposed access road's intersection with US 395/US 395 Frontage Road would be modified accordingly, although these modifications are not considered a part of this proposed project.

The existing Cabin Bar Ranch Road would be demolished in Phase I of the proposed project. The asphalt from the road would be pulverized and recycled for use in the base of the proposed new access road. The road would be left in an unimproved condition (e.g., dirt or gravel) to maintain utility access along its alignment. The existing stone and wood Cabin Bar Ranch sign at the US 395 entrance to Cabin Bar Ranch Road would remain in place.

Twenty-five on-site parking spaces are proposed for employees and visitors and would be located adjacent to the east side of the Phase I portion of the bottling facility. This area would also include four paved loading and delivery docks for trucks. As Phase II is built, four additional loading docks would be constructed adjacent to the east side of the Phase II portion of the bottling facility, thus expanding the paved truck loading and delivery area to the rear (east) of that facility, eventually creating one large area for trucks immediately adjacent to the east side of the bottling facility. As the Phase III storage warehouse is built south of the proposed bottling facility, there would also be another paved loading and delivery area for trucks, immediately adjacent to the east side of the warehouse.

In addition to the proposed access road, the project proposes a 20-foot-wide paved fire access road around the perimeter of the proposed bottling facility, with fire hydrants along its alignment. The project site would be surrounded by chain link fencing with a gated entrance, with access granted to authorized personnel, site visitors, and emergency response providers.

d. Project Sustainability/Rooftop Solar Array

A rooftop solar photovoltaic array is proposed for installation on the water bottling facility prior to full project buildout. This solar array would provide supplemental power to the facility (i.e., less than 7.5 percent of the project's energy needs) to reduce the project's net increase in the use of commercially purchased electricity. The solar array would consist of photovoltaic cells, and no water consumption would be required for its operation.

The project would also incorporate other sustainable features to contribute to the project's LEED certification. Some of the sustainability features being proposed include:

- Providing an employee shuttle as a form of alternative transportation.
- Providing preferential parking for low-emissions and fuel-efficient vehicles.
- Reducing the "heat island effect" with the use of concrete in the parking areas and high SRI roofing (light-colored roof).
- Implementation of an enhanced recycling program.
- Site lighting designed to meet LEED requirements for the Light Pollution Reduction credit for industrial projects.

CGR would continue to employ recycling and conservation programs similar to those in place at the nearby Olancha bottling plant as a part of its regular operations, including programs for cardboard, wood pallets, PET preforms (i.e., plastic forms that are blown into bottles), and other plastics.

As early as Phase II of project development, CGR would seek Leadership in Energy and Environmental Design (LEED) certification at the Green or Certified level.

e. Leach Mound System/Stormwater Detention Basin

(i) Leach Mound

The project would not be connected to a public sewer system since there is no central utility for wastewater discharge servicing the project site or the neighboring community of Cartago. As previously mentioned, the wastewater pipes previously installed under Cabin Bar Ranch Road as part of the unrealized 1982 subdivision would be removed during project construction, and therefore project-related wastewater would need to be disposed of on-site. A septic tank is proposed for the primary treatment of domestic effluent from the site (e.g., restrooms, employee break area), with a leach mound system proposed for secondary treatment.

The leach mound would be located east of the planned bottling facility and would be designed to avoid contamination of groundwater resources. An accepted method for secondary treatment of wastewater prior to contact with groundwater, the leach mound would provide a minimum of five feet of soil or sand between the bottom of the leach rock and the highest groundwater levels. Pressurized leach lines would be located at the top of the mound in a bed of gravel and would be supplied from a pump located in the septic tank. Below the gravel layer, a minimum of two feet of sand would treat and filter effluent to remove suspended solids. The system would be sized to accommodate a one-gallon-per-square-foot-per-day application rate of wastewater to the sand. The base area of the mound would be sized according to the allowable application rate of effluent into the existing surficial soils, as determined by percolation testing. The leach mound system design for the proposed project would be reviewed and permitted by Inyo County Environmental Health Department prior to installation.

(ii) Stormwater Detention Basin

The project proposes a stormwater detention basin to control stormwater flows from the project site and small quantities of rinsewater from the filter cleaning operation of the bottling facility. The stormwater

detention basin would be located east of the proposed bottling facility and would capture stormwater flows from the developed portions of the project site (i.e., where impervious surfaces replace natural surfaces). The stormwater basin would be designed to facilitate the existing stormwater flow patterns across the project site, with stormwater collected from the area west of the basin and conveyed downslope (east) towards Owens Dry Lake. In accordance with Lahontan Regional Water Quality Control Board (LRWQCB) standards, the stormwater detention basin would be designed so that no increase in stormwater flows is discharged off-site following completion of the proposed project. The basin would also be designed in accordance with the applicable water quality regulations of the LRWQCB. Specifically, the stormwater detention basin would be designed to retain a storm event producing approximately 0.47 inches of precipitation and would be protected with rip-rap or another material designed to receive and retain sheet flow and eliminate the possibility of erosion at the detention basin outflow.

Approximately once every two to three months, the bottling plant's ceramic filtration system would be cleaned with non-toxic cleaning agents. The wastewater from this cleaning operation would be transferred to a holding tank where the pH would be balanced, and then ultimately discharged into the proposed stormwater detention basin. Additionally, a minimal amount of process water (i.e., water that gets spilled during bottling operations) would be discharged to the stormwater basin. The operation of the proposed stormwater detention basin would require a permit from the LRWQCB. The stormwater basin would also comply with Inyo County standards, and would be approved by the Inyo County Public Works (Building and Safety) Department.

f. Utilities

As discussed above, several of the on-site utilities (i.e., water, sewer, telephone) are buried beneath the alignment of the existing Cabin Bar Ranch Road. The existing sewer lines, pump, and associated septic field designed to serve the previously proposed Cabin Bar Ranch subdivision would be abandoned and removed as part of the removal of the existing access roadway and grading activities that would occur under the proposed project. The telephone line would remain. Electricity would continue to be provided to the project site from an existing LADWP power line originating to the east of the proposed plant location. Upon removing the asphalt, the unimproved alignment of Cabin Bar Ranch Road and the gate accessing the road at US 395 would be retained to allow utility companies access to their utilities.

As previously discussed, domestic potable water for employees at the bottling facility (e.g., restrooms, kitchens, break rooms) would be provided by an on-site domestic groundwater well (CBR-1). There is currently no existing public water system available for the site; however, existing domestic well CBR-1 is connected to the model home through existing underground water lines. Domestic well CBR-1 and the existing water distribution system were previously permitted by the Inyo County Environmental Health Services Department. Under the proposed project, portions of the existing water line extending from CBR-1 under Cabin Bar Ranch Road would be re-aligned and extended to the proposed bottling facility. If the portions of the existing water lines to be retained are found to be in a degraded condition or are otherwise deficient, they would also be replaced as necessary. Since the proposed on-site domestic potable water system would serve more than 25 employees, it would be designed to meet County water quality standards for a public water system, as approved by the Inyo County Environmental Health Services Department.

g. Security, Lighting, and Fire Protection

The project site would be surrounded by chain link fencing with a gated entrance, with access granted to authorized personnel, site visitors, and emergency response providers only. The remainder of Cabin Bar Ranch would continue to be fenced with a barbed-wire fence. Aside from employees, only pre-designated vendors, site visitors, and emergency response providers would be permitted on-site during specific hours of operation. The fencing would be designed so that CGR could restrict access to the site at its discretion.

Exterior lighting would be installed to illuminate the loading dock area, building entrances, at outdoor mechanical equipment pads. All exterior lighting would be directed downward to illuminate work surfaces and would be fully shielded. Fully shielded lighting would also be used in the parking lot. The site lighting plan would be designed to meet LEED requirements for the Light Pollution Reduction credit for industrial projects and in a manner to avoid impacts on nearby residents and motorists on US 395.

To provide adequate fire protection, the project proposes an approximately 300-square-foot, stand-alone fire suppression building that would house a separate water storage tank and propane-fueled water pump for fire suppression. This separate building would be located east across the parking lot from the bottling facility. The fire suppression building would supply the fire sprinkler systems in the bottling facility and warehouse. Additional fire suppression features include a 20-foot-wide paved fire access road around the perimeter of the bottling facility and warehouse. Fire hydrants would encircle the bottling facility along the paved fire access road, as required by Cal-Fire.

h. Tree Removal

Cabin Bar Ranch contains hundreds of mature trees on the property, as well as brush, bushes and grasses. The project proposes to remove approximately 281 trees that are over 12 inches in diameter. The types of trees proposed to be removed are predominantly non-protected willow species and are located within the alignment of the planned access road and proposed building sites. The number of trees to be removed constitutes a relatively small percentage of the total number on Cabin Bar Ranch.

Proposed landscaping would be limited to revegetation with a native seed mix of disturbed areas not otherwise planned for project improvements. There are numerous cottonwood, elm, and willow trees west of the proposed plant location on Cabin Bar Ranch, which would be retained to visually screen the proposed buildings from US 395. No additional landscaping of the proposed new access road from US 395 is planned.

5. CONSTRUCTION SCHEDULE

The proposed project would be built in three phases over a several-year period, as follows:

Phase I

- 106,500-square-foot portion of the bottling facility
- Two bottling lines
- Four loading docks

- New permanent access road
- Stormwater detention basin
- Leach mound system
- Fire suppression building, fire hydrants, and access road
- Remove two abandoned single-family homes
- Demolition of existing Cabin Bar Ranch Road
- Construction anticipated as early as 2012
- Phase I is anticipated to be in operation for five to nine years prior to construction of Phase II

Phase II

- 92,000-square-foot addition to the bottling facility
- Two additional bottling lines
- Four additional loading docks
- Rooftop solar photovoltaic array (potential to occur in Phase III)
- Construction anticipated in 2017 to 2021
- Construction of fourth and final bottling line anticipated in 2024 to 2025

Phase III

- 40,000-square-foot storage warehouse
- Construction anticipated in 2025 to 2027
- The storage warehouse could be constructed prior to the Phase II building addition, if warehouse space is needed before an increase in bottling production is required

For the construction of Phase I, site preparation, demolition, earthwork, grading and installation of utilities would be undertaken following project approval and are estimated to take approximately two months. Phase I building construction would begin approximately two months later, with site concrete and paving taking place five months after construction starts. Interior office improvements and installation of the first bottling line would begin six months following the start of construction.

During construction, an estimated 12,600 cubic yards of grading would occur. The proposed project has been designed to balance all on-site cut and fill, and no material would be imported or exported from the site during construction. Construction staging and stockpiling would all occur on-site. The staging area for Phase I and II of project construction would be the proposed loading dock area east of and adjacent to the proposed Phase III warehouse. Construction staging for Phase III would be located in the same area during the construction of the proposed warehouse.

6. NECESSARY APPROVALS

Approvals required for the development of the proposed project include, but are not limited to, the following:

a. Inyo County

- Certification of Final Environmental Impact Report
- General Plan Amendment for Land Use Designation Changes from Rural Protection (RP) and Rural Residential, High Density (RRH) to Light Industrial (LI)
- Zone Reclassification for Zone Changes from Open Space, 40-Acre Minimum (OS-40) and Rural Residential One-Acre Minimum (R-1.0) to Light Industrial (M-2)
- Conditional Use Permit for a proposed water bottling facility within the Light Industrial (M-2) zone
- Lot Line Adjustment (LLA) process to create the 34.41-acre project site from the overall 420-acre Cabin Bar Ranch property
- Parcel merger for all residential parcels, likely through a Reversion to Acreage process or lot merger and road abandonment
- Building & Safety Department for grading and building permits
- Environmental Health Services Department approval of leach mound system
- Environmental Health Services Department approval of a public water system (for use of the well designated as CBR-1 for domestic water supplies for the proposed project)
- Olancha Community Service District (CSD) (review and approval of fire protection components/requirements for the project)
- County of Inyo Public Works/County Fire Marshall review and approval of fire protection measures
- Other permits and approvals by Inyo County as deemed necessary

b. State of California Agencies

- California Department of Transportation, District 9 (Encroachment Permit)
- California Department of Public Health, Food and Drug Branch (Water Bottling Plant License)
- Great Basin Unified Air Pollution Control District (grading and excavation)
- Regional Water Quality Control Board, Lahontan Region (NPDES requirements, SWPPP)
- US Army Corps of Engineers (Determination of APE for Section 404 Permit; if eligible Cultural Resources located within APE for the Proposed Undertaking, Section 106 review of cultural investigations required by US Army Corps of Engineers and California Office of Historic Preservation for compliance with the National Historic Preservation Act; if cultural resources affected, MOU by both agencies for mitigation)
- Cal-Fire (review and approval of fire protection features within a High Fire Severity Zone)
- Other permits and approvals by other agencies deemed necessary.

3.0 GENERAL DESCRIPTION OF ENVIRONMENTAL SETTING

The project site is located on a portion of Cabin Bar Ranch, just south of the unincorporated community of Cartago, Inyo County, California, 14 miles southwest of Keeler and 20 miles south of Lone Pine. The following is a summary of the general environmental setting around the project site. More complete and specific discussions are contained under the corresponding sections in **Section 4.0**, *Environmental Impact Analysis*, of this Draft EIR.

A. OVERVIEW OF ENVIRONMENTAL SETTING

A. Aesthetics

(1) Visual Character

In general, the visual character of the project area is rural in nature and the majority of land is undeveloped. Therefore, the visual character is largely defined by the geographic features of the north-south trending Owens Valley, and views in the project vicinity are generally uninterrupted and panoramic. The broad floor of the Owens Valley is framed by the Sierra Nevada Mountains on the west and by the Inyo Mountains on the east. Owens Dry Lake is a prominent visual feature in the center of the valley floor. The limited development in the project vicinity is confined to primarily residential neighborhoods in the unincorporated community of Cartago, north of the project site, remnant features of former mineral extraction enterprises, and the one-story Crystal Geyser spring water bottling plant in Olancha, approximately 0.75 miles south of the project site.

The project site is located on Cabin Bar Ranch, which is generally flat, especially along the portion bordering Owens Dry Lake. Cartago Creek flows west from the base of the Sierras across the ranch, approximately 1,000 feet south of the northern property line. Nine known springs are located on the ranch, along a former irrigation ditch that runs parallel to US 395 south of Cartago Creek, approximately 550 feet east of the roadway.

Existing on-site buildings and structures on Cabin Bar Ranch include two vacant single-family homes, a former model home and several empty concrete pond basins built as part of the unrealized residential development, a mobile home currently occupied by a caretaker, and a barn/former metalworking shop. Other on-site improvements include a man-made irrigation pond, two fenced pasture areas, and Cabin Bar Ranch Road, a paved road along the northern property line that serves as the primary access to the project site from US 395. The road terminates in a cul-de-sac within the undeveloped 17.90-acre subdivision. The remainder of the ranch on both sides of US 395 is now dominated by sagebrush scrub; there are also localized areas of riparian vegetation near springs and along Cartago Creek, alkaline areas near the Owens Dry Lake shoreline that support no vegetation, and unimproved roadways remaining from cattle ranching operations. Several wells drilled at different times are also located on the ranch west of US 395. The ranch is enclosed with barbed-wire fence along its perimeter.

(2) Views

The project site is located in a relatively undeveloped portion of the Owens Valley. Because the project site is typical of a lightly developed parcel in the vicinity of Cartago and does not contain any unique visual resources, the project site itself is not considered a scenic resource.

Located west of the project site is US 395, a visual corridor. Motorists traveling north and south are afforded views of on-site features immediately adjacent to the roadway. These features include the river rock building "ruin" at the entrance to Cabin Bar Ranch Road, the road itself, the Cabin Bar Ranch sign, the two former pasture areas and surrounding fencing, and the unimproved access road south of Cabin Bar Ranch Road. Additionally, a stand of thick vegetation is visible on the west side of US 395 where Cartago Creek crosses under the roadway. Views of the project site interior from US 395 encompass trees and shrubs in the center of the project site, sage brush and other vegetative ground cover, the former model home, and vegetation surrounding the former irrigation pond. This vegetation intermittently obstructs distant views to the east. Nonetheless, distant views of the Owens Dry Lake shoreline beyond the project site and the Inyo Mountains are available to motorists along US 395.

From vantage points in Cartago, views south toward the project site are somewhat limited by vegetation in the northern portion of the project site, but include ornamental trees along the site's northern boundary, Cabin Bar Ranch Road, and the former pasture areas adjacent to US 395. Views into the interior of the project site encompass the unrealized subdivision, the former model home, pasture areas, and vegetation along Cartago Creek. On-site vegetation generally obstructs views Cartago into the distance south and southwest of the project site.

(3) Light and Glare

Cabin Bar Ranch, including the project site, is located in a relatively undeveloped portion of Inyo County with low ambient nighttime lighting conditions and dark nighttime skies, features which are considered valued assets by the community. Light sources primarily consist of shielded residential lighting and some residential street lights with low levels of light overspill or sky glow. Although no streetlights are located along US 395, vehicle headlights on this roadway constitute a temporary source of light in the project vicinity. Sensitive uses with respect to nighttime light or glare in the project vicinity are limited to the residential uses in the town of Cartago. Users that would be sensitive to daytime glare from reflected sunlight include motorists traveling on US 395 and residents in Cartago. No buildings, signs, or uses that would potentially generate glare are currently located on the project site.

B.1 Air Quality

The proposed project is located within the Great Basin Valley Air Basin (GBVAB), an area of approximately 13,975 square miles that includes all of Inyo, Mono and Alpine counties.

The project site is located in Inyo County. The average minimum temperature is in the upper 20s (degrees Fahrenheit), while the average maximum temperature is in the mid- to high 70s. Most of the precipitation in this area (approximately 70 percent) occurs between November and February. Spring is the windiest season, with fast-moving northerly weather fronts. During the day, southerly winds result from the strong solar heating of the nearby mountain slopes, causing upslope circulation. Summer winds are northerly at night as a result of cool air draining from higher to lower elevations.

The extent and severity of the air pollution problem in the GBVAB is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). The Inyo County portion of the GBVAB has a non-attainment status for ozone (State standards only), associated with the effect of transported pollution from outside of Inyo County, rather than local generation of ozone or ozone precursors. All of the GBVAB is designated non-attainment for the PM_{10} State standard. Although Inyo County is categorized as non-attainment for the State ozone standard, there is no ozone implementation plan for attainment in Inyo County, nor is one required under State law. According to the California Air Resources Board (CARB), ozone levels would improve in the air basin only when substantial mitigation measures are more fully implemented in upwind air basins.

Owens Dry Lake, the remnant of a prehistoric lake in Owens Valley, is located adjacent to the project site to the east. Through both natural and anthropogenic means, the lake has been dry for most of the 20th century. The exposed lakebed is a major source of dust in southern Owens Valley, causing violations of Federal PM_{10} standards. Since 1998, the Great Basin Unified Air Pollution Control District (GBUAPCD) has been working with the City of Los Angeles under a Memorandum of Agreement (MOA) to mitigate dust emissions resulting from Owens Lake. The MOA has been formally included in the GBUAPCD's air quality control plan since 1999 and has resulted in the LADWP's Owens Lake Dust Mitigation Program.

The project site represents a portion of the approximately 420-acre Cabin Bar Ranch. The majority of the ranch is currently non-operational. The former model home is currently maintained by Crystal Geyser Roxane and used by visiting employees for short stays. Utilities, including wastewater, water supply, and telephone lines, were installed beneath Cabin Bar Ranch Road at the time of its construction, but the wastewater and water supply lines were never activated and are not currently in use. The former model home is currently served by a septic system and electricity is provided via an above-ground LADWP power line originating east of the project site. An underground water line connects domestic well CBR-1 to the existing model home. Based on the above, emissions from current maintenance activities are expected to be minimal.

Some population groups, including children, the elderly, and acutely and chronically ill persons (especially those with cardio-respiratory diseases) are considered more sensitive to air pollution than others. Sensitive land uses are those most frequently used by sensitive receptors, including homes, schools, hospitals and care facilities. The closest sensitive land uses to the project site are residential uses located approximately 300 feet to the north.

B.2 Global Climate Change

Global climate change refers to changes in average climatic conditions on Earth, including changes in temperature, wind patterns, precipitation and storms. Historical records indicate that global climate changes have occurred in the past due to natural phenomena; however some data indicate that the current global conditions differ from past climate changes in rate and magnitude. Global climate change attributable to human emissions of Greenhouse Gases (GHGs) is currently one of the most important and widely debated scientific, economic and political issues in the United States and the world. There continues to be significant scientific uncertainty concerning the extent to which increased concentrations of GHGs have caused or will cause climate change, and over the appropriate actions to limit and/or respond to climate change.

GHGs are those compounds in the Earth's atmosphere that play a critical role in determining temperature near the Earth's surface. More specifically, these gases allow high-frequency shortwave solar radiation to enter the Earth's atmosphere, but retain some of the low frequency infrared energy, which is radiated back from the Earth towards space, resulting in a warming of the atmosphere. GHGs include carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor, nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). CO_2 is the most abundant GHG in the atmosphere. GHGs are the result of both natural and anthropogenic activities. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions. Some of the potential impacts in California of global warming attributable to GHGs may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires and more drought years.

In response to growing scientific and political concern regarding global climate change, California adopted a series of laws to reduce both the levels of GHGs in the atmosphere and to reduce the emissions of GHGs from commercial and private activities within the State. Most notably, the enactment of AB 32 commits the State to achieve the following: 2000 GHG emission levels by 2010, which represents an approximately 11 percent reduction from business as usual (BAU); 1990 levels by 2020, approximately 28.5 percent below BAU; and 80 percent below 1990 levels by 2050. In addition, the California Green Building Code (CALGreen) establishes mandatory measures for new residential and non-residential buildings to reduce environmental impacts and encourage sustainable building practices. These measures include energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. At the local level, the Inyo County General Plan, Land Use and Circulation Elements include goals, policies, and implementation measures that address global climate change.

C. Biological Resources

Biological resources within the study area, includes sensitive plant species, sensitive wildlife species, tree cover associated with wildlife movement, and jurisdictional features, based upon the findings of a general biological resources assessment and a jurisdictional delineation. On-site plant communities include red willow thicket, rubber rabbitbrush scrub, Mexican rush marsh, salt grass flat, disturbed/Fremont cottonwood stand, and ruderal areas. A total of 4.14 acres of red willow thicket (a sensitive plant community) occurs on site. Although no sensitive plant species were observed on site during the field survey, due to the presence of potentially suitable habitat there is a potential for the following species to occur: Tulare rockcress, upswept moonwort, scalloped moonwort, mingan moonwort, Kern Plateau bird's beak, sanicle cymopterus, Kern River fleabane, field ivesia, creamy blazing star, Charlotte's phacelia, Parish's popcorn-flower, Bailey's greasewood, Owen's Valley checkerbloom, cut-leaf checkerbloom, marsh arrow-grass, grey-leaved violet.

No sensitive wildlife species were observed during the field survey. However, the following sensitive wildlife species have the potential to occur on site due to suitable on-site habitat: Wong's springsnail, Owen's tui chub, Owen's pupfish, Swainson's hawk, loggerhead shrike, yellow breasted chat, least bittern, least Bell's vireo, spotted bat, Owen's Valley vole, and Mohave ground squirrel.

The study area is located within the Owens Valley, just west of the Owens Lake Playa, which is along the course of the Pacific Flyway, a major migratory wildlife corridor. Although Owens Lake Playa no longer provides the water resources that it historically did, the lake still contains some water and is a resource to

both local wildlife and species moving through the region. In addition, the study area is situated south of the CDFG Cartago Wildlife Area, which provides habitat for water fowl, wading birds, and shorebirds. No corridors occur within the study area. The study area is located along the southwestern margin of the Owens Lake Playa near the existing Crystal Geyser Roxane plant, the rural town of Cartago, and US 395. In comparison with the many square miles of surrounding undeveloped open space, the habitat that the study area supports is degraded due to previous grazing and livestock ranching activities, which has resulted in the introduction of many non-native species and compaction of the soil, and thus does not provide high quality habitat for wildlife. In addition, the developed structures and human activity within the vicinity, as well as the traffic associated with US 395, would likely deter wildlife from utilizing the area, especially in comparison to other less disturbed open space areas in the vicinity. However, the native willow, cottonwood, and ash trees within the study area, as well as non-native sycamore and poplar tree stands which were planted on site, provide tree cover which is limited in the Owens Lake Playa area.

The study area supports wetlands that occur along the southwestern edge of the larger approximately 74,000-acre Owens Lake Playa, and an intermittent tributary drainage identified as Cartago Creek that conveys flow toward the on-site wetland area. Based on the jurisdictional delineation, the study area supports a total of approximately 6.03 acres of Army Corps of Engineers/Regional Water Quality Control Board jurisdictional "waters of the U.S." and 6.16 acres of California Department of Fish and Game jurisdictional streambed and associated riparian habitat, of which approximately 5.97 acres are wetlands. No wetlands within the study area were observed in relation to Cartago Creek. The wetlands within the study area are located along the fringe of the larger Owens Lake Playa along its southwestern extent.

D. Archaeological/Paleontological Resources

Based on phase I and II cultural resource assessments, four archaeological resources (CBR-S-2, CBR-I-1, CBR-I-2, and CBR-I-3), were located within or in the immediate adjacent vicinity of the project site. Five archaeological resources (CBR-S-1/H, CA-INY-43/H (P-14-000043), P-14-005197, TS-1, and TS-2), and approximately 30 other isolated artifacts were located within Cabin Bar Ranch. In addition, approximately 60 cultural resources (i.e., built environment resources, prehistoric archeological resources, and historic archaeological resources) were previously recorded within a half-mile radius of the project site.

Although no previously recorded vertebrate fossil localities are within the project site or within the Cabin Bar Ranch property, several localities have been recorded nearby in the same sedimentary deposits that underlie the project site. The surficial deposits of the project site consist of younger Quaternary Alluvium which may contain Holocene- or Late Pleistocene-aged paleontological resources. The closet locality from these deposits is LACM 4538 that produced a specimen of Columbian mammoth six miles south of the project site near the North Haiwee Reservoir. LACM 7716–7719 was encountered approximately 14 miles northeast of the project site on northeast shores of Owens Lake that produced specimens of bony fish, bird, jack rabbit, pocket gopher, and an even-toed ungulate. LACM 4691 was encountered on the north margin of the lake approximately 16 miles north of the project site that produced *Proboscidea* remains and a fossil mountain lion.

Several Native American human remains have been encountered during past construction activities and several known Native American cemeteries are known to exist in the immediate vicinity of the project site and Cabin Bar Ranch property and in the surrounding region. However, results of the Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC) did not indicate any known Native

American cultural resources from the NAHC archives within the project site or the Cabin Bar Ranch property. The NAHC results also noted, however, that Native American cultural resources may be inadvertently discovered during ground-breaking activities. Therefore, a representative of the Lone Pine Paiute-Shoshone Indian Reservation was present to monitor the archaeological test excavations at CBR-S-2.

E. Historic Resources

Existing historical resources identified within the project site and in its vicinity include Residence 2 (1871) and Residence 3 (ca. 1910), the old carriage road associated with the two residences, the stone ruin of the former Cartago Freight Depot (1872), and the remains of the Cartago Boat Landing (1872). The Cartago Boat Landing (CHPI-INY-006/P-14-005197) is a designated historic resource (California Point of Historical Interest). In addition, the Cartago Boat Landing and the Cartago Station House (stone ruin), are considered eligible as potential historic sites. Residence 2 is substantially altered and only the original squared timber cabin wall, contained within the residence, is considered eligible as a potential historic site. The old carriage road to Residence 2 is also considered eligible as a potential historic site. The project site has a high probability for buried subsurface historic period remains associated with activities of the Gomez Ranch and the Cerro Gordo Freighting Company from 1871 to the early 1880s. Residence 3 lacks sufficient integrity or significance to be considered eligible as potential historical resource.

F. Land Use and Planning

(1) Project Site

The 34.41-acre project site is designated for Rural Protection (RP) and Rural Residential High Density (RRH) land uses in the Inyo County General Plan Land Use Element. The corresponding zoning is OS-40 (Open Space, 40-acre minimum) and RR-1.0 (Rural Residential, one-acre minimum) in the Zoning Code. The residential designation applies to a 17.90-acre unrealized residential subdivision in the north-central portion of Cabin Bar Ranch, which was previously subdivided into 16 lots and zoned to permit the development of single-family homes.

(1) Surrounding Uses

The project site is located within the approximately 420-acre Cabin Bar Ranch, which is located south of the unincorporated town of Cartago. The General Plan land use and zoning designations for the area surrounding Cabin Bar Ranch are Rural Protection (RP) and Open Space, 40-acre minimum (OS-40). Cabin Bar Ranch is bordered to the east by the western shoreline of Owens Dry Lake; to the south by undeveloped, privately owned land known as the Elton Lease Parcel; and to the west by the Sierra Nevada Mountain Range, the base of which is approximately one mile west of Cabin Bar Ranch.

Development in the project vicinity is limited to low-density residential and commercial uses in the town of Cartago north of the project site, the US 395 roadway alignment, and the existing Crystal Geyser bottling facility to the south in Olancha.

The unincorporated town of Cartago has a population of approximately 92 residents and contains a mix of rural single-family residential and mobile homes, limited low-density commercial development (some abandoned), and the remnants of a soda ash processing plant that ceased operations in the 1930s. With the

exception of several parcels adjacent to US 395 that are zoned C-2 (Highway Services and Tourist Commercial), the majority of Cartago is zoned RMH (Single Residence and Mobile Home Combined District).

G. Hydrogeology and Surface Hydrology

The project site is located near the southern end of Owens Lake. The project area lies within the southwestern portion of the Owens Valley Groundwater Basin of the South Lahontan Hydrologic Region. The base of the southern Sierra Nevada Mountains is approximately one mile west of the project site. The climate of the area is generally arid in the vicinity of Owens Lake, with rainfall generally low along the valley floor. However, at the higher mountain elevations and along the watershed divide, rainfall and snowfall occur in much greater amounts.

The project area is predominantly underlain by alluvium, comprising granitic debris of various particle sizes ranging from sand to boulders, which has been eroded and transported by streams draining the mountains and discharging into Owens Lake. The alluvial deposits contain the major aquifer system within the southwestern portion of the Owens Valley Groundwater Basin.

Four water supply wells, two other privately-owned wells, three test wells and numerous large and small springs are located on Cabin Bar Ranch. There is a likely correlation between the natural springs that supply the four water wells and an on-site fault line (i.e., the Spring Line fault) that was considered a barrier to easterly groundwater flow. The springs are believed to mark the line of contact beneath Cabin Bar Ranch between the water-bearing alluvial deposits and less permeable, finer-grained lakebed sediments.

There are three separate aquifer systems underlying Cabin Bar Ranch and the surrounding area: a shallow aquifer zone extending to approximately 75-80 feet below ground surface (bgs), an underlying principal aquifer, and a deep aquifer zone. The wells proposed as the source of the production water supply would withdraw from the shallow aquifer zone. Wells on the Elton Lease Parcel to the south are currently pumped by Crystal Geyser to supply its existing Olancha bottling plant and withdrawal from the same shallow aquifer zone. A total volume of approximately 1,148 acre-feet (AF) of groundwater is estimated to be currently stored in the shallow aquifer zone west of the Spring Line fault.

H. Noise

The project site is located within Cabin Bar Ranch, which is located south of the unincorporated community of Cartago. Cabin Bar Ranch is predominantly open space and rural in nature, as are surrounding uses, except for low-density residential and commercial development in the town of Cartago immediately north of the project site and Crystal Geyser's existing bottling plant operation located to the south of the property. The nearest sensitive receptors, residential land uses within Cartago, are located approximately 300 feet north of the project site.

I. Transportation

The project site is located in a rural portion of Inyo County, just south of the unincorporated community of Cartago, and approximately 0.75 miles north of the existing Crystal Geyser Roxane (CGR) spring water bottling plant in Olancha. The project site is directly accessed from US 395 at Cabin Bar Ranch Road.

US 395 serves as the key transportation corridor connecting the eastern Sierra region, Mono and Inyo Counties, and western central Nevada to Southern California. It also serves as the "Main Street" for the communities it passes through. In the vicinity of the project site, US 395 is an interstate highway running north-south between the east side of the Sierra Nevada Mountains and the west side of the Owens Dry Lake. The section of US 395 adjacent to the project site, and running through Cartago, consists of one lane in each direction with no median. US 395 is recognized as a Class III bike route within the study area.

Cabin Bar Ranch Road is a private paved access road into Cabin Bar Ranch that extends approximately 2,000 feet from US 395 to a cul-de-sac at the center of a formerly proposed, but unrealized, on-site subdivision.

B. RELATED PROJECTS

The area within which the related projects are identified includes the immediate vicinity of the project site as well as regional resources (e.g., groundwater basin, air quality district) that could be affected by the proposed project. The development of eight related projects is anticipated in the project study area. **Table 3-1**, *Related Projects*, summarizes the location, land use, and size of each related project. The analysis of cumulative development also assumes a 1.3 percent average annual growth factor in traffic levels between 2012 and 2027. The related project locations are mapped in **Figure 3-1**, *Related Projects Location Map*. The projected cumulative development is addressed in the analyses of each of the environmental issues.

CEQA requires that the analysis of potential project impacts include cumulative impacts. CEQA defines cumulative impacts as "two or more individual effects which, when considered together are considerable or which compound or increase other environmental impacts." The analysis of cumulative impacts need not be as in-depth as what is performed relative to the proposed project, but instead is to "be guided by the standards of practicality and reasonableness."

Cumulative impacts are anticipated impacts of the proposed project along with reasonably foreseeable growth. Reasonably foreseeable growth may be based on either:

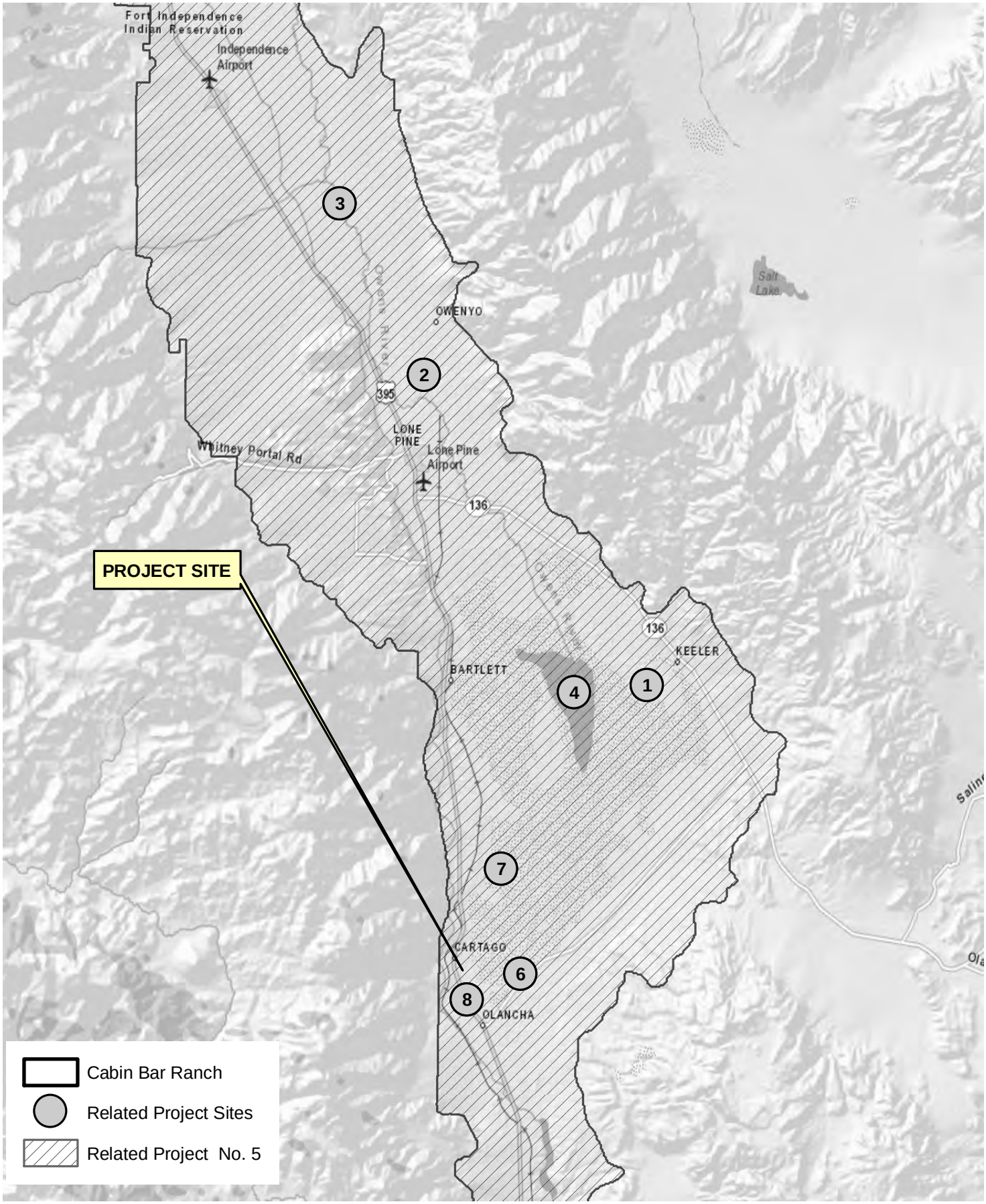
- A list of past, present, and reasonably anticipated future projects producing related or cumulative impacts; or
- A summary of projections contained in an adopted general plan or related planning document designed to evaluate regional or area wide conditions.

Table 3-1

Related Projects List

Related Project No.	Project	Land Use	Approx. Size
1	LADWP Owens Lake Dust Mitigation Program	Environmental Mitigation and Dust Control Program on Owens Lake	40 sq. miles
2	LADWP Southern Owens Valley Solar Ranch Project	Solar Photovoltaic Energy Development Project	3,100 acres
3	LADWP Lower Owens River Project (LORP)	Environmental Mitigation and Habitat Restoration Program	62 miles
4	LADWP Owens Lake Master Plan	Environmental Master Plan	110 sq. miles
5	Desert Renewable Energy Conservation Plan	Renewable Energy Master Plan with Habitat Conservation	3 million acres in Inyo County
6	Dirty Socks Duck Club	Duck Hunting and Waterfowl Habitat Area	292 acres
7	Rio Tinto Trona Mine	Trona Ore Mining	248 acres
8	Caltrans Highway 395 Olancha/Cartago Four-Lane Project	Highway Widening Project	12.6 miles

Source: PCR Services, August 2012.



PCR

N

0 10 Miles

Related Projects Location Map

Cabin Bar Ranch Water Bottling Facility Project

Source: ESRI Street Map, 2009; PCR Services Corporation, 2012.

FIGURE

3-1

4.0 ENVIRONMENTAL IMPACT ANALYSIS
A. AESTHETICS

INTRODUCTION

This section addresses the potential aesthetic and visual resource impacts that could result from the proposed project with respect to views, visual quality, and light and glare. The analysis of potential impacts on views focuses on the extent to which a project would interfere with visual access to visual resources from an off-site vantage point or corridor in the project vicinity. The analysis of potential impacts to visual quality focuses on the loss of aesthetic features or the introduction of contrasting features that could degrade the visual character of the project area. The analysis of potential lighting impacts focuses on whether the project would substantially increase lighting effects on light-sensitive uses or the overall ambient nighttime lighting conditions. The analysis of glare focuses on whether glare effects would interfere with off-site activities.

1. ENVIRONMENTAL SETTING

a. Regulatory Framework

(1) Inyo County General Plan

The Inyo County General Plan provides direction as to the County's vision for future development within the County. Although the General Plan does not directly address the design of individual buildings, it embodies broad design policies and regulations that guide planning efforts throughout the County. The General Plan recognizes that Inyo County's natural resources are the prime contributor to the scenic and visual environment within the County. Creeks and rivers, the Owens Dry Lake, mountain ranges and valleys, expansive ranches and agriculture areas provide a unique visual experience within the County.

Within the General Plan, Chapter 8.8, Visual Resources, outlines the goals and policies designed to protect visual resources within the County. Chapter 8.8 defines two types of views within the County: view corridors and viewsheds. A view corridor is defined as a highway, road, trail, or other linear feature that offers travelers a vista of scenic areas within the County, while a viewshed is the area that can be seen from a single fixed vantage point and viewing direction. The General Plan recognizes that if a viewer is moving, as when traveling along a roadway (a view corridor), the viewshed changes as the person moves, with the foreground items changing rapidly and the background items remaining fairly consistent for a long period of time.

Goals and policies outlined in the General Plan to manage and protect visual resources within the County include: **Policy VIS-1.4**, which requires building equipment to be screened from public view and **Policy VIS-1.6**, which requires exterior lighting to be shielded and directed downward. With respect to industrial development, **Policy LU-4.9** requires landscaping to screen industrial uses where necessary. Although the County is no longer pursuing efforts to obtain additional scenic route designations on US 395, the highway is nonetheless recognized by this analysis as an important visual corridor that carries a high level of tourist

traffic within the County.[1] For instance, the 2010 General Plan Annual Progress Report further states that the County is participating in US 395 Corridor planning to strengthen identity along the highway.

(2) Inyo County Code

The Inyo County Code also contains regulations to ensure project development occurs in an orderly manner that is compatible with surrounding uses and the development intentions of Inyo County. Through the Inyo County Code, the County also specifies development standards that help prevent the obstruction of views and preserve the visual aesthetic of an area. The primary means in which the Inyo County Code guides the aesthetic characteristics of development throughout the County and protects existing viewsheds through development standards such as height restrictions and setback requirements. In addition, in commercial and industrial zones, the amount of development which can occur on a given property is controlled by Floor Area Ratios (F.A.R.).

b. Existing Conditions

(1) Visual Character

Visual character refers to the overall aesthetics of an area or a field of view. Aesthetic features often consist of unique or prominent natural or man-made attributes or several small features that, when viewed together, create a whole that is visually interesting or appealing. The focus of visual quality analysis is on the potential for the loss of aesthetic features or the introduction of contrasting features that could degrade the visual character of a project area.

(a) Visual Character of the Project Site

Because there is limited development in the project area, its visual character is largely defined by the geographic features of the north-south trending Owens Valley, and views in the project vicinity are generally uninterrupted and panoramic in nature. The broad floor of the Owens Valley is framed by the Sierra Nevada Mountains on the west and by the Inyo Mountains on the east. Owens Dry Lake is a prominent visual feature in the center of the valley floor, which is otherwise lightly vegetated with sagebrush, grasslands, and stands of riparian vegetation along waterways and ponds. The limited development in the project vicinity is confined to primarily residential neighborhoods in the unincorporated community of Cartago, north of the project site, remnant features of former mineral extraction enterprises, and the one-story Crystal Geyser spring water bottling plant in Olancha, approximately 0.75 miles south of the project site.

As discussed in **Section II, Project Description**, of this Draft EIR, Cabin Bar Ranch sits at an elevation of approximately 3,600 feet above msl. The site is generally flat, especially along the portion bordering Owens Dry Lake. Cartago Creek, an intermittent creek fed by winter snowmelt and summer storm events, flows west from the base of the Sierras across the ranch, approximately 1,000 feet south of the northern property line. Nine known springs are located on the ranch, their locations indicated by the presence of a former irrigation ditch that runs parallel to US 395 south of Cartago Creek, approximately 550 feet east of the roadway.

[1] *Correspondence from Inyo County Planning Department, August 19, 2011.*

Previous uses on Cabin Bar Ranch include cattle ranching and agricultural operations and an undeveloped 12.43-acre residential subdivision. Existing on-site buildings and structures include two vacant single-family homes, a former model home and several concrete ponds built as part of the unrealized residential development, a mobile home currently occupied by a caretaker, and a barn/former metalworking shop. The former model home is currently maintained by CGR. Other on-site improvements include a man-made irrigation pond, two fenced pasture areas, and Cabin Bar Ranch Road, a paved road along the northern property line that serves as the primary access to the project site from US 395. The road terminates in a cul-de-sac within the undeveloped 12.43-acre subdivision. The remainder of the ranch on both sides of US 395 is now dominated by sagebrush scrub; there are also localized areas of riparian vegetation near springs and along Cartago Creek, alkaline areas near the Owens Dry Lake shoreline that support no vegetation, and unimproved roadways remaining from cattle ranching operations. Several wells drilled at different times are also located on the ranch west of US 395. The ranch is enclosed with barbed-wire fence along its perimeter. Views of the existing project site are shown in **Figure 4.A-1** through **4.A-6**, and views across the project site from US 395 and Cartago are shown in **Figures 4.A-7** and **Figures 4.A-8.**

(b) Visual Character of the Surrounding Area

In general, the project area is rural in nature and the majority of land is undeveloped. Prominent visual resources include the geographic features of the north-south trending Owens Valley, which is framed by Sierra Nevada Mountain Range on the west and the Inyo Mountains on the east, and contains the Owens Dry Lake in the center of the valley floor. The most notable Sierra Nevada peak in the project vicinity is Olancha Peak (12,123 feet). The Inyo Mountains, which range from 9,000 to 11,000 feet, are located east of the project site across the Owens Dry Lake. To the east and southeast is the Coso Range, which is topped by 8,160-foot Coso Peak.

Development in the project vicinity is primarily concentrated in the town of Cartago, north of the project site. Cartago contains a mix of rural single-family and mobile homes, limited low-density commercial development along US 395 (some abandoned), and the remnants of a soda ash processing plant that ceased operations in the 1930s. A soda ash pile associated with these former operations remains visually prominent. Other notable development in the project vicinity includes the existing Crystal Geyser spring water bottling plant in Olancha, which consists of five, one-story warehouse-like buildings surrounded by parking areas and a chain-link fence. Additionally, two abandoned one-story buildings (i.e., an abandoned house and café, both made of river rock) are located along the east side of US 395 between the project site and the Crystal Geyser Olancha plant. The remainder of the area between the project site and the existing Crystal Geyser Olanch plant is undeveloped and contains vegetation in the form of groundcover, shrubs, and trees. The eastern escarpment of the Sierra Nevada Mountains rises sharply above the valley floor approximately one mile west of the project site. No visible development occurs on the eastern slope of the Sierra Nevada Mountains, or in between the mountain range and the US 395 adjacent to the west side of the project site. The Los Angeles Aqueduct is located just west of US 395, but sits at ground level and is not visible from US 395. Owens Dry Lake is located east of the project site, and the portion near the project site contains areas of thick vegetation and marshy wetlands.

Visibility is generally good in the vicinity of the project site. Under ideal conditions of atmospheric clarity, the lack of screening vegetation and low visual absorption capability of the desert environment tend to make landscape features visually prominent. Visibility generally decreases under gusty wind conditions, when

dust from the Owens Dry Lake is uplifted and suspended in the wind. Views of the surrounding area are shown in **Figures 4.A-9** through **4.A-13**.

(2) Views

(a) Views of the Project Site

The project site is located in a relatively undeveloped portion of the Owens Valley. Two off-site vantage points were identified from which the project site is visible: US 395 and residential land uses in Cartago north of the project site. Because the project site is typical of a lightly developed parcel in the vicinity of Cartago and does not contain any unique visual resources, the project site itself is not considered a scenic resource from these vantage points. Views from the two vantage points are described below in terms of foreground and distant views.

US 395 is acknowledged as an important visual corridor that carries a high level of tourist traffic within the County. Although not an official scenic highway, US 395 is designated as the Eastern Sierra Scenic Byway by the Coalition for Unified Recreation in the Eastern Sierra (CURES). CURES is a non-profit, community-based organization that maintains 23 scenic turnouts and interpretative displays along US 395 from Topaz Lake in north Mono County to Little Lake in southern Inyo County. Motorists traveling north and south are afforded views of on-site features immediately adjacent to the roadway. These features include the river rock building "ruin" at the entrance to Cabin Bar Ranch Road, the road itself, the Cabin Bar Ranch sign, the two former pasture areas and surrounding fencing, and the unimproved access road south of Cabin Bar Ranch Road. Additionally, a stand of thick vegetation is visible on the west side of US 395 where Cartago Creek crosses under the roadway. Views of the project site interior from US 395 encompass trees and shrubs in the center of the project site, sage brush and other vegetative ground cover, the former model home, and vegetation surrounding the former irrigation pond. This vegetation intermittently obstructs distant views to the east. Nonetheless, distant views of the Owens Dry Lake shoreline beyond the project site and the Inyo Mountains are available to motorists along US 395.

From vantage points in Cartago, views south toward the project site are somewhat limited by vegetation in the northern portion of the project site, but include ornamental trees along the site's northern boundary, Cabin Bar Ranch Road, and the former pasture areas adjacent to US 395. Views into the interior of the project site encompass the unrealized 12.43-acre subdivision, the former model home, pasture areas, and vegetation along Cartago Creek. On-site vegetation generally obstructs views from Cartago into the distance south and southwest of the project site.

(b) Panoramic Views

The project site itself is not considered a scenic resource and views across the project site from US 395 and Cartago are limited by existing on-site vegetation and development. Existing vegetation in the central part of the project site blocks views of the Owens Dry Lake's western shoreline from US 395, but distant views of the eastern shoreline opposite the project site, and the Inyo Mountains, are visible. From Cartago, distant views to points south and southwest of the project site are screened by existing vegetation along the project site's northern boundary, within the center of the site, and along the Cartago Creek corridor.

View 1: View of entrance to Cabin Bar Ranch from US 395, looking south.

View 2: View of Cabin Bar Ranch sign from US 395, looking east.

PCR

Views of the Existing Project Site, Views 1 and 2

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project
Source: PCR Services Corporation, 2011.

FIGURE
4.A-1

View 3: View of pastures adjacent to US 395 at the northern portion of the project site, looking southfrom Cartago. The line of trees in the mid ground denote the alignment of Cartago Creek.

View 4: Views of existing Cabin Bar Ranch Road from immediately inside entrance along US 395, looking east. Note views of the Owens Dry Lake and Inyo Mountains in background.

PCR

Views of the Existing Project Site, Views 3 and 4

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project
Source: PCR Services Corporation, 2011.

FIGURE
4.A-2

View 5: View of former on-site man-made irrigation pond, looking south.

View 6: View of former model home.

PCR

Views of the Existing Project Site, Views 5 and 6

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project
Source: PCR Services Corporation, 2011.

FIGURE
4.A-3

View 7: View of on-site abandoned single-family homein the central portion of the parcel. This home would be removed.

View 8: View of an existing on-site well drilled in 2010, looking north.

PCR

Views of the Existing Project Site, Views 7 and 8

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project
Source: PCR Services Corporation, 2011.

FIGURE
4.A-4

View 9: View of southern entrance to the Cabin Bar Ranch from US 395, looking east.

View 10: Views of Cartago Creek from US 395, looking east.

PCR

Views of the Existing Project Site, Views 9 and 10

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project
Source: PCR Services Corporation, 2011.

FIGURE
4.A-5

View 11: View of typical on-site vegetation.

View 12: View of vegetation at the location of the proposed bottling facility. This vegetation would be removed.

PCR

Views of the Existing Project Site, Views 11 and 12

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project
Source: PCR Services Corporation, 2011.

FIGURE
4.A-6

View 1: View northeast across the project site from US 395 towards the Owens Dry Lake and Inyo Mountains.

View 2: View east across the project site from US 395 towards the Owens Dry Lake and Inyo Mountains.

PCR

Views Across the Project Site, Views 1 and 2

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: PCR Services Corporation, 2011.

FIGURE

4.A-7

View 3: Views south across the project site from the town of Cartago.

PCR

Views Across the Project Site, View 3

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project
Source: PCR Services Corporation, 2011.

FIGURE
4.A-8

View 1: View of Olancha Peak and the eastern escarpment of the Sierra Nevada Mountains west of US 395. The undeveloped non-contiguous parcel of Cabin Bar Ranch is in the foreground.

View 2: Views of US 395 leading north away from the project site.

PCR

Views of the Project Vicinity, Views 1 and 2

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project
Source: PCR Services Corporation, 2011.

FIGURE
4.A-9

View 3: View of the town of Cartago adjacent to US 395, looking north.

View 4: Views of existing residential development in the town of Cartago, north of the project site.

PCR

Views of the Project Vicinity, Views 3 and 4

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project
Source: PCR Services Corporation, 2011.

FIGURE
4.A-10

View 5: Additional views of existing residential development in the town of Cartago, looking northwest across US 395.

View 6: View of remnant soda ash pile located east of the town of Cartago, immediately north of the project site. The proposed bottling facility would be located south of the soda ash pile, in the center of the photograph.

PCR

Views of the Project Vicinity, Views 5 and 6

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: PCR Services Corporation, 2011.

FIGURE

4.A-11

View 7: View of abandoned development along US 395 immediately south of Cabin Bar Ranch, looking northeast.

View 8: View of existing Crystal Geyser Bottling Facility in Olancha, Approximately 0.75 miles south of the project site, looking north.

PCR

Views of the Project Vicinity, Views 7 and 8

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project
Source: PCR Services Corporation, 2011.

FIGURE
4.A-12

View 9: View of US 395 heading south.

View 10: Views of undeveloped Elton Lease property south of Cabin Bar Ranch, looking northwest.

PCR

Views of the Project Vicinity, Views 9 and 10

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: PCR Services Corporation, 2011.

FIGURE

4.A-13

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(3) Light and Glare

(a) Light

For purposes of this analysis, "light" refers to light emissions, or the degree of brightness, generated by a given source. Artificial lighting may be generated by point sources – focused points of origin representing unshielded light sources – or by indirectly illuminated sources of reflected light. Light may be directed downward to illuminate an area or surface; cast upward into the sky by an unshielded fixture and refracted (dispersed) by atmospheric conditions (sky glow); or cast sideways and outwards onto off-site properties (light trespass or overspill).

Sky glow and light overspill are considered forms of light pollution, which encompasses any adverse impacts of artificial lighting. The International Dark Sky Association defines light pollution as, "Any adverse effect of artificial light including light trespass, sky glow, and glare, with secondary effects including decreased nighttime visibility and energy waste."

(b) Glare

Glare is defined as focused, intense light that is directly emanated by a source or indirectly reflected by a surface from a source. Glare is measured in terms of the degree of contrast between bright foreground objects and a darker background and is subjectively referred to as brightness or light intensity. Human perception of light intensity as a source of actual glare is dependent on the size, position, distance, and degree of visibility of a source from a given vantage point; the number of sources in a given area; and the luminance, or light levels, to which the eye of the beholder is adapted (i.e., background light levels). Glare is generally experienced as visual discomfort caused by high contrast in brightness levels in a given environment, or it may cause actual disability, such as a reduction in motorists' ability to see or identify objects.

Daytime glare is typically caused by the reflection of sunlight from highly reflective surfaces, such as buildings clad with broad expanses of highly polished surfaces or broad, light-colored areas of paving. Daytime glare is generally most pronounced during early morning and late afternoon hours when the sun is at a low angle and the potential exists for interference with vision and driving conditions. It may also hinder outdoor activities conducted in surrounding land uses, such as sports.

Nighttime glare refers to direct, intense, focused light, as well as reflected light, and hampers visibility. Glare caused by direct sources of light generally originates from mobile and therefore transitory sources, such as automobiles. Nighttime glare may also originate from particularly intense stationary sources, such as floodlights. As with daytime sun glare, such intense light may cause undesirable interference with driving or other activities.

Cabin Bar Ranch is located in a relatively undeveloped portion of Inyo County with low ambient nighttime lighting conditions and dark nighttime skies. Light sources primarily consist of shielded residential lighting and some residential street lights with low levels of light overspill or sky glow. Although no streetlights are located along US 395, vehicle headlights on this roadway constitute a temporary source of light in the project vicinity. Sensitive uses with respect to nighttime light or glare in the project vicinity are limited to the residential uses in the town of Cartago and motorists on US 395. Users that would be sensitive to daytime

glare from reflected sunlight include motorists traveling on US 395 and residents in Cartago. No buildings, signs, or uses that would potentially generate glare are currently located on the project site.

2. ENVIRONMENTAL IMPACTS

a. Thresholds of Significance

(1) Appendix G to the State CEQA Guidelines

Appendix G of the *CEQA Guidelines* contains the Initial Study Environmental Checklist form used during preparation of the project Initial Study (contained in **Appendix A** of this EIR). The Initial Study Environmental Checklist questions relating to aesthetics have been utilized as the thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it would:

- Have a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway.
- Substantially degrade the existing visual character or quality of the site and its surroundings.
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

The Initial Study prepared for the proposed project (provided in **Appendix A** of this Draft EIR) determined that the project is not located near a state scenic highway and would have no impact on scenic resources within a scenic highway corridor. Therefore, this Appendix G checklist question does not require further discussion in this Draft EIR. Based on the remaining checklist questions, the proposed project would have a significant impact on aesthetics if it would:

AES-1: Have a substantial adverse effect on a scenic vista;

AES-2: Substantially degrade the existing visual character or quality of the site and its surroundings; or

AES-3: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

b. Methodology

(1) Views/Scenic Vistas

This analysis evaluates proposed project development and operational characteristics and their potential impacts on views from off-site vantages. Preliminary architectural drawings were used to determine the location, height, and size of the project's proposed features. These dimensions were then compared to the existing on-site conditions. The intent of this analysis is to determine whether off-site views of the valued visual resources identified above would be obstructed or diminished as a result of project development. The evaluation further considers project's proposed design features that would offset specific impacts.

As discussed above, the Inyo County General Plan designates two types of views within the County, View Corridors and Viewshed. A view corridor is defined as a highway, road, trail, or other linear feature that offers travelers a vista of scenic areas within the County, while a viewshed is the area that can be seen from a given vantage point and viewing direction. For the purposes of this analysis, US 395 is considered a view corridor, while the overall north-south trending Owens Valley, framed by the Sierra Nevada Mountains to the west and the Inyo Mountains to the east are considered a viewshed. The Owens Dry Lake, located in the center of the Owens Valley, is also considered a viewshed.

In general, only views from public places are considered in a CEQA analysis of potential view impacts. In this regard, California courts have routinely held that "obstruction of a few private views in a project's immediate vicinity is not generally regarded as a significant environmental impact." However, due to the proximity of nearby residential uses and the relatively undeveloped nature of the project site, views from the private residences in Cartago are also considered in this analysis. Thus, motorists along US 395 and the residents of Cartago are considered the vantage points for the purposes of this analysis.

(2) Visual Character

Potential impacts on visual character are dependent on the degree and nature of contrast between the proposed project and its surroundings. For this project, the existing visual character of the project site and the project area were photographically documented and compared to the expected appearance of the site following proposed project buildout, in order to determine whether the visual character of the area would be adversely affected or degraded. Factors such as changes in the appearance of the project site and changes in land use character (e.g., proposed building height and massing, building setbacks, landscape buffers, signage, and other features) are taken into account. The analysis relies on site plans and elevation renderings of the proposed facilities, as well as proposed project design features intended to increase the visual compatibility of the proposed project with its surroundings.

(3) Light and Glare

Artificial light impacts are typically associated with light that occurs during the evening and nighttime hours, and may include streetlights, security and building lighting, illuminated signage, vehicle headlights, and other point sources. Uses such as residences are considered light sensitive since they are typically occupied by persons who have an expectation of privacy during evening hours and who are subject to disturbance by bright light sources. In addition, Inyo County contains many rural areas where dark nighttime skies are considered a valued asset to be maintained through the implementation of County policies.

The analysis of light and glare identifies the location of light-sensitive land uses and describes the existing ambient conditions on the project site and in the project vicinity. The analysis describes the project's proposed light and glare sources, and the extent to which project lighting would spill off the project site onto light-sensitive areas or raise ambient nighttime light levels.

Glare is primarily a daytime occurrence caused by the reflection of sunlight or artificial light from highly polished surfaces, such as window glass or reflective materials, and, to a lesser degree, from broad expanses of light-colored surfaces. Glare generation is typically related to sun angles, although glare resulting from reflected sunlight can occur regularly at certain times of the year. Glare can also be produced during evening and nighttime hours by artificial light, such as vehicle headlights, directed toward a light sensitive land use.

The analysis also considers the potential for light to reflect off building surfaces (glare) and the extent to which such glare would interfere with the operation of motor vehicles or other activities.

c. Project Features

As described in **Section II,** *Project Description*, the project proposes a spring water bottling facility and ancillary uses on a 24.30 acres of the 420 acre Cabin Bar Ranch. The water bottling facility would be located in the north-central portion of the Cabin Bar Ranch and would include an approximately 198,500-square-foot bottling plant and an approximately 40,000-square-foot storage warehouse. Ancillary uses to the bottling facility would include a rooftop solar photovoltaic array, a fire suppression building, a proposed stormwater retention basin, a leach mound, a fire access road, and a parking and truck staging area. To provide adequate access from US 395 to the bottling facility, the project would remove the site's existing access road, Cabin Bar Ranch Road, and construct a new permanent access road approximately 2,500 feet to the south. proposed design features are described below.

(1) Architectural Style, Massing, and Setback

The design of proposed project facilities would be similar to those at the nearby CGR bottling facility in Olancha, although the proposed facility would be farther from US 395, set back approximately 1,200 feet east of US 395 and approximately 150 feet from the property's northern boundary, and heavily screened from view by existing vegetation. Proposed buildings would be metal-framed with an exterior metal siding painted in a color intended to blend with the landscape. The buildings would reach a maximum height of approximately 39 feet above grade. All truck loading docks would be located along the rear (east) wall of the bottling facility and warehouse, facing Owens Dry Lake. To screen the bottling facility from off-site vantage points, the bottling facility has been sited in the north-central corner of the project site and existing vegetation would be retained in its vicinity.

(2) Lighting and Signage

The project would include limited exterior lighting in the loading dock area, at all building entrances, at the outside mechanical equipment pads, and in the parking lot. All exterior lighting would be fully shielded to direct lighting downward and to prevent spillover. On-site lighting would be designed to meet LEED requirements for the Light Pollution Reduction credit for industrial projects and in a manner to avoid impact to nearby residents and the low ambient lighting conditions in the vicinity. Within at least 500 feet of the property's boundary, CGR will provide signage identifying the bottling facility for both the north and south directions on U.S. Hwy 395.

(3) Landscaping

Cabin Bar Ranch contains hundreds of mature trees on the property, as well as brush, bushes, and grasses. The project proposes to remove from the project site approximately 281 trees that are over 12 inches in diameter. The types of trees proposed to be removed are predominantly non-protected willow trees located along the planned access road and in the location of the project's proposed buildings. Although trees would be removed to accommodate the proposed facilities, the number of non-protected trees to be removed constitutes a relatively small percentage of the total number of trees on Cabin Bar Ranch. There are numerous cottonwood, elm, and willow trees west of the proposed plant location on Cabin Bar Ranch Road and along US 395, which would be retained to visually screen the proposed buildings from view from US 395.

The existing mature trees along the existing Cabin Bar Ranch Road and along the northern boundary of the Cabin Bar Ranch would also be retained under the proposed project.

Landscaping proposed under the project would be limited to re-vegetation of disturbed areas not occupied with project improvements with a native seed mix. No additional landscaping of the entry from US 395 is planned.

d. Analysis of Project Impacts

AES-1: Would the proposed project would not have a substantial effect on a scenic vista?

Construction

As previously stated, the project site itself is not considered a scenic resources. Distant views of the western shoreline of Owens Dry Lake, adjacent to the project site, are obstructed by existing vegetation from off-site vantage points. However, distant views of the eastern shoreline of the Owens Dry Lake opposite the project site and the Inyo Mountains are visible from US 395, beyond the existing vegetation. No views across the project site of scenic vistas are available from Cartago, due to vegetation cover. Construction equipment on the project site would only comprise a small portion of the viewshed from nearby vantage points and would be visible due to the height of existing on-site vegetation. Although some vegetation would be removed during construction, the remaining vegetation would continue to obstruct views across the project site from US 395 and the residents of Cartago. Therefore, because project construction would not remove enough vegetation to affect views across the project site, impacts with respect to scenic vistas during construction would be less than significant.

Operation

As previously discussed, the project site itself is not considered a scenic resource. Vantage points that have views of and across the project site include motorists on US 395 and the residents of Cartago. As discussed above, views from US 395 are primarily restricted to foreground and mid-ground views from the roadway, although distant views of the eastern shoreline of Owens Lake opposite the project site and the Inyo Mountains area available above existing on-site vegetation. Views from the residents of Cartago are limited by existing vegetation to foreground and mid-ground views of the project site. Since the project does not include structures that are taller than existing vegetation or create a visual envelope greater than the existing on-site vegetation, the proposed project would not obstruct existing distant views of the eastern shoreline of the Owens Dry Lake opposite the project site or the Inyo Mountains from US 395. As also mentioned above, views across the project site from residents of Cartago are limited due to existing onsite vegetation. Under the proposed project, views from Cartago across the project site would remain materially the same as under existing conditions, in that vegetation along the northern property boundary of the project site will be left largely intact and the majority of trees on the project site will remain.

AES-2: Would the proposed project substantially degrade the existing visual character or quality of the site and its surroundings?

Construction

Development of the project would require the removal of existing on-site features (including vegetation), grading, and the construction of the project's proposed features. Construction would take place during various phases beginning in 2012, and extending to 2027. During periods of construction, elements that are visually incompatible with the project vicinity would be temporarily introduced to the project site. For instance, construction vehicles may be seen traveling throughout the site. In addition, construction equipment would be visible in the on-site staging area. Towards the beginning of the construction periods, a de-vegetated area would be visible to the casual observer. During the construction process, unfinished buildings would also be visible from the identified vantage points.

Nonetheless, construction impacts would be temporary and would cease upon the completion of the project. Project construction would not require the removal or alteration of notable visual resources on the project site, such as the river rock building ruin adjacent to US 395, pasture areas, the Cabin Bar Ranch sign, or vegetation along the Cabin Bar Ranch Road alignment. The removal of existing on-site, non-native trees which would result in a change in the site's visual character; however, the number of trees that would be removed constitutes only a small portion of total on-site trees and would not result in a significant aesthetic impact on the vicinity. Further, the area where trees would be removed is densely populated with trees, and the remaining trees would continue to screen construction activity. Because of the short-term nature of construction activities, the small portion of the overall Cabin Bar Ranch on which construction would occur, and the distance from US 395 and Cartago, it is anticipated that construction activities would not substantially alter, degrade, eliminate or generate long-term contrast with the visual character of the surrounding area or the existing project site. Therefore, impacts with respect to visual character during construction would be less than significant.

The Inyo County General Plan and Inyo County Code establish goals, policies, and regulations to protect views and visual resources within the County. Applicable aesthetic policies of the General Plan and Inyo County Code are evaluated in **Section 4.F, Land Use**, of this Draft EIR. As described therein, the project would be substantially consistent with applicable goals, policies, and regulations of the Inyo County General Plan and the Inyo County Code and impacts related to policy compliance would be less than significant.

Operation

The project site and surroundings are rural in nature. The project site is largely undeveloped and mostly consists of a cover of sagebrush scrub, nonnative grass, shrubs, and trees. The proposed project would remove vegetation and introduce a 198,500-square-foot bottling facility and 40,250-square-foot warehouse, as well as an ancillary building, and a stormwater retention basin on a 24.30-acre area at the north-central portion of the Cabin Bar Ranch property. The proposed buildings would be approximately 39 feet above grade. As a result, the proposed project would introduce a large man-made feature on a portion of the project site largely comprised of existing vegetation, and would result in a increase in the mass and scale of on-site development and development within the project vicinity. In addition, the project would replace vegetation that has an organic visual character with a large, man-made structure with a warehouse-like appearance.

While the project would result in a change in the visual character from identified vantage points, it should be noted that the project has been strategically located on the project site to reduce the project's change to the overall land use character and visual character of the project vicinity. Further, existing vegetation would be

retained to screen the facility from identified vantage points. The facility's on-site location, which would buffer the facility from less intense uses to the north, in combination with the existing vegetation, would screen the facility from identified vantage points. In particular, the bottling facility would be set back approximately 150 feet from the property's northern boundary and just south of the remnant soda ash pile. This placement would locate the bottling facility approximately 300 feet from the closest residence in Cartago. This 300-foot-wide area would include vegetation and open space to buffer the bottling facility from the less intense residential uses. The vegetation would also serve to screen views of the facility from Cartago residential uses. In addition, no development would occur on the portion of the project site directly south of and adjacent to Cartago; the paved Cabin Bar Ranch Road would be demolished, and vegetation along the property's northern boundary as well as the former pasture area would be retained in their existing condition. With regard to land uses south of the project site, by locating the proposed bottling facility on the northern portion of the project site, the project would retain the rural land use and visual character of the undeveloped area between the project site and existing bottling facility in Olancha.

With respect to views for motorists along US 395, the proposed bottling facility would be located approximately 1,500 feet from the US 395 roadway. In this manner, the proposed facility would be obstructed by existing vegetation, including the numerous cottonwood, elm, and willow trees west of the proposed facility's location, and along Cabin Bar Ranch Road and US 395. In this manner, the visual character of the project site from US 395 would continue to be of the river rock building ruin, pasture areas, and vegetation in the central portion of Cabin Bar Ranch. While the bottling facility would likely be visible, it would largely be obstructed from view and would constitute a subordinate aesthetic feature on the project site.

With respect to views from Cartago, the project site would be located southeast of existing homes of Cartago, and the bottling plant would be located south of the remnant soda ash pile. Views of the project site from Cartago would continue to be of the former pasture area, model home, and vegetation along Cabin Bar Ranch Road, as under existing conditions. As mentioned above, the existing vegetation along the project site's northern boundary would largely visually screen views of the bottling facility from the residences in Cartago in accordance with Policy LU-4.9 of the General Plan.

The proposed facility would be consistent with the visual character of the area, which already includes other man-made features including the existing CGR bottling plant approximately 0.75 mile south of the project site and the remnant soda ash pile located north of the proposed location of the bottling facility. The bottling facility would be painted with neutral colors intended to blend with the landscape. The applicant would ensure that all features of the project site are maintained in good visual repair. All loading operations and parking would be screened from view from off-site vantage points because they would be located at the rear (east) side of the proposed facilities, out of sight from motorists on US 395 and the residences of Cartago.

In summary, the proposed project would introduce a bottling facility to a relatively undeveloped project site in a rural portion of Inyo County. However, because the proposed facility has been strategically located on the Cabin Bar Ranch and existing vegetation would be retained to screen the facility from view and retain the visual character of the project site from US 395 and the residences of Cartago, the proposed project would result in a less than significant impact to the visual character of the project site and surrounding vicinity from identified vantage points.

AES-3: Would the proposed project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Construction

Construction would take place during daytime hours, and would therefore, not increase nighttime lighting conditions. Further, construction would not utilize highly reflective materials which induce glare. Therefore, the project would result in a less than significant impact with respect to light and glare.

Operation

As discussed above, the project vicinity is rural in nature and contains few sources of nighttime light and daytime glare. Sources of nighttime light are limited to the existing Crystal Geyser Bottling Plant in Olancha, the residential and limited commercial development in Olancha north of the project site, and from motorists on US 395. Streetlights are not installed along US 395 in the vicinity of the project site.

The project would increase sources of nighttime light on the project site. For example, as discussed above, exterior lighting would be provided in the loading dock area, at all building entrances, at the outside mechanical equipment pads, and in the parking lot. Nonetheless, the project would include design features to ensure that lighting is contained to the project site, not directed at nearby residents or motorists, and not result in a material increase in the nighttime ambient lighting conditions. Specifically, as discussed above, all on-site lighting would be designed to be fully shielded to direct lighting downward and to prevent spillover. In addition, to maintain the project vicinity's rural ambient nighttime light levels, on-site lighting would be designed to meet LEED requirements for the Light Pollution Reduction credit for industrial projects. In this way, the proposed project would maintain the rural ambient nighttime light environment in the project vicinity. Further, it is important to note that the bottling facility would be located in a portion of Inyo County with limited existing development (i.e., Cartago and the existing Olancha Plant). In this way, the bottling facility would be located in an area with existing sources of limited nighttime light and would prevent new sources of light in portions of Inyo County that are undeveloped. With respect to light and glare on US 395, as discussed in **Section 4.I,** *Transportation*, of this Draft EIR, the project would result in a negligible increase in traffic along US 395, and most of this traffic would be generated during the daylight hours. Lastly, the project does not propose the use of highly reflective materials in the design of the proposed structures that would increase daytime glare from the project site.

In summary, although the proposed project would increase the amount of nighttime light on the project site, this increase would be limited through the use of directional lighting and LEED design standards, and would be located within a portion of Inyo County that has existing development that contributes to nighttime lighting. Therefore, the proposed project would result in a less than significant impact with respect to light and glare.

3. MITIGATION MEASURES

As discussed above, the project would result in a less than significant impact with respect scenic vistas, the visual character of the project site and surrounding vicinity, and light and glare. As the project's design would result in less than significant aesthetic impacts, no mitigation measures are necessary.

4. CUMULATIVE IMPACTS

Eight related projects have been identified in the project area, as discussed in **Section 3.0,** *General Description of the Environmental Setting*. Three are in the project vicinity, including Caltrans's proposed widening and realignment of US 395, Rio Tinto's mining of trona within Owens Lake, and expansion of the Duck Club north of Cartago. Under the Caltrans project, the existing US 395 alignment adjacent to Cabin Bar Ranch would become a frontage road to the new US 395 alignment. The construction of the Caltrans project is anticipated to begin until 2016, by which time the proposed project's intersection with US 395 and Phase I of the bottling facility would be complete. At that time, reconstruction of the project site access road's intersection with the frontage road and US 395 would conform to applicable Caltrans requirements, but would not significantly alter the visual character of the project site or surrounding vicinity, or views of the proposed facility. The completed US 395 alignment, in combination with the proposed bottling facility, would contribute to a cumulative change to the visual character in the immediate project vicinity. For instance, the widened roadway would introduce a linear feature of greater scale than the existing US 395 roadway, while the proposed bottling facility would increase the intensity of development on the project site. Nonetheless, the widened roadway would be similar in form, materials, textures, and colors to the existing US 395 roadway. In addition, the roadway would be flush with the existing ground level. In this manner, the US 395 alignment would become consistent with the configuration of US 395 through much of the Owens Valley and would not result in a significant change in the visual character of the project vicinity. With respect to the proposed project, as discussed above, the bottling facility would retain existing landscaping, be painted in a complimentary color, and be located away from existing viewers to reduce potential visual impacts.

The remaining five related projects are too distant from the project site, or too programmatic in nature (as opposed to site-specific), to contribute to cumulatively significant aesthetic impacts. Therefore, the project, considered together with the related projects, would not result in a considerable contribution to cumulatively significant impacts on aesthetic resources, since those projects are relatively distant from the project site and would not be visible from the majority of off-site vantages with views of the project site. In the limited areas where the proposed project and the two remaining related projects may be viewed together, such as distant views from the Inyo Mountains west of the site, the changes in the visual landscape would likely not be noticeable by the casual observer because they would alter only a small portion of the larger Owens Valley and would be located in geographically separate locations.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The proposed project would result in a less than significant impact with respect to aesthetic impacts and no mitigation measures are required.

4.0 ENVIRONMENTAL IMPACT ANALYSIS
B.1 AIR QUALITY

INTRODUCTION

This section addresses air emissions generated by the construction and operation of the proposed Crystal Geyser Roxane Beverage Bottling Plan Project, and the potential impacts to air quality. The analysis also addresses the consistency of the proposed project with the air quality policies set forth within the Great Basin Unified Air Pollution Control District's (GBUAPCD) Air Quality Management Plan for the County of Inyo. The analysis of project-generated air emissions focuses on whether the proposed project would cause an exceedance of an ambient air quality standard or appropriate significance threshold.[1] Air quality technical data utilized in this section is included as **Appendix B** of this EIR.

1. ENVIRONMENTAL SETTING

a. Regulatory Framework

A number of statutes, regulations, plans, and policies have been adopted that address air quality issues. The project site and vicinity are subject to air quality regulations developed and implemented at the federal, state, and local levels. At the federal level, the United States Environmental Protection Agency (USEPA) is responsible for implementation of the Federal Clean Air Act (CAA). Some portions of the CAA (e.g., certain mobile source and other requirements) are implemented directly by the USEPA. Other portions of the CAA (e.g., stationary source requirements) are implemented by state and local agencies.

(1) Federal Clean Air Act

The CAA was first enacted in 1955 and has been amended numerous times in subsequent years, with the most recent major amendments having been enacted in 1990. The CAA requires national air quality standards, known as National Ambient Air Quality Standards (NAAQS) (see **Table 4.B.1-1**, *Ambient Air Quality Standards*, below) and specifies dates for achieving compliance.

Title II of the CAA pertains to mobile sources, such as cars, trucks, buses, and planes. Reformulated gasoline, automobile pollution control devices, and vapor recovery nozzles on gas pumps are a few of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have strengthened in recent years to improve air quality. For example, the standards for NO_X emissions have lowered substantially and the specification requirements for cleaner burning gasoline are more stringent. Because the project would generate air emissions during construction and operation of proposed uses, the CAA is applicable to the project.

[1] *Emissions estimation worksheets are provided in Appendix B of this EIR.*

Table 4.B.1-1

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [a]		Federal Standards [b]		
		Concentration [c]	Method [d]	Primary [c,e]	Secondary [c,f]	Method [g]
Ozone (O^3)	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.075 ppm (147 µg/m³)		
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		—		
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	No Separate State Standard		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	15 µg/m³		
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m³)	None	Non-Dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m³)		35 ppm (40 mg/m³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	—
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.03 ppm (56 µg/m³)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m³)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m³)		0.10 ppm	None	
Sulfur Dioxide (SO_2)	24 Hour	0.04 ppm (105 µg/m³)	Ultraviolet Fluorescence	0.14 ppm (365 µg/m³)	—	Ultraviolet Flouresence; Spectrophotometry (Pararosaniline Method)[9]
	3 Hour	—		—	0.5 ppm (1300 µg/m³)	
	1 Hour	0.25 ppm (655 µg/m³)		0.075 ppm (196 µg/m³)	—	
Lead (Pb) [h]	30 Day Average	1.5 µg/m³	Atomic Absorption	—	—	—
	Calendar Quarter	—		1.5 µg/m³	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average	—		0.15 µg/m³		

Table 4.B-1 (Continued)

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [a]		Federal Standards [b]		
		Concentration [c]	Method [d]	Primary [c,e]	Secondary [c,f]	Method [g]
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		**No Federal Standards**		
Sulfates (SO_4)	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride [h]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

[a] *California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter (PM_{10}, and $PM_{2.5}$) and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.*

[b] *National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For $PM_{2.5}$, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the USEPA for further clarification and current federal policies.*

[c] *Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.*

[d] *Any equivalent procedure which can be shown to the satisfaction of the California Air Resources Board (CARB) to give equivalent results at or near the level of the air quality standard may be used.*

[e] *National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.*

[f] *National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.*

[g] *Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.*

[h] *CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.*

Source: California Air Resources Board (http://www.arb.ca.gov/research/aaqs/aaqs2.pdf, updated 09/08/10), and U.S. Environmental Protection Agency (http://www.epa.gov/air/criteria.html and http://www.epa.gov/air/lead/pdfs/20081015_ pb_naaqs_final.pdf [see "FR Notices" at http://www.epa.gov/ttn/naaqs/standards/pb/s_pb_index.html], accessed April 2012]

(2) California Clean Air Act

The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the State to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practical date. Table 4.B.1-1 shows the CAAQS currently in effect for each of the criteria pollutants as well as the other pollutants recognized by the State. As shown in Table 4.B.1-1, the CAAQS include more stringent standards than the NAAQS for most of the criteria air pollutants. In general, the California standards are more health protective than the corresponding NAAQS. In addition, the California Air Resources Board (CARB) has established standards for other pollutants recognized by the State, such as sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Because the project would generate air emissions during construction and operation of proposed uses, the CCAA is applicable to the project.

Table 4.B.1-2, *Great Basin Valley Air Basin Attainment Status*, below, provides a summary of the GBUAPCD's attainment status with respect to federal and state standards. The Great Basin Valley Air Basin (GBVAB) is designated as having attained state standards for all pollutants except ozone and particulates PM_{10} (24-hour) and having attained all federal standards except 24-hour PM_{10}. Therefore, discussion of impacts for this project will focus on those pollutants.

Table 4.B.1-2

Great Basin Valley Air Basin Attainment Status

Pollutant	National Standards	California Standards
Ozone (1-hour standard)	No Standard [a]	Non-attainment [e]
Ozone (8-hour standard)	Unclassified or attainment unknown	Non-attainment
PM_{10} (24-hour standard)	Non-attainment	Non-attainment
PM_{10} (annual standard)	No Standard [c]	Non-attainment
$PM_{2.5}$ (24-hour standard)	Unclassified or attainment unknown	Attainment [d, e]
$PM_{2.5}$ (annual standard)	No Standard [c]	Unclassified or attainment unknown
Carbon Monoxide	Attainment [b]	Attainment [b]
Nitrogen Dioxide	Attainment [b]	Attainment [b, e]
Sulfur Dioxide	Attainment [b]	Attainment [b]
Lead	Attainment [b]	Attainment [b, e]
Visibility Reducing Particles	N/A [d]	Unclassified
Sulfates	N/A [d]	Attainment [b]
Hydrogen Sulfide	N/A [d]	N/A [d]
Vinyl Chloride	N/A [d]	N/A [d]

N/A = not applicable

[a] *The NAAQS for 1-hour ozone was revoked on June 15, 2005 for all areas except Early Action Compact areas.*

[b] *An air basin is designated as being in attainment for a pollutant if the standard for that pollutant was not violated at any site in that air basin during a three year period.*

[c] *The NAAQS for annual PM_{10} was revoked on September 21, 2006.*

[d] *EPA or CARB does not monitor or make status designations for this pollutant.*

[e] *Final Regulation Order (2010): Area designations for State Ambient Air Quality Standards, http://www.arb.ca.gov/regact/2010/area10/areafrodc.pdf.*

Source: USEPA Region 9 and California Air Resources Board, 2012.

(3) California Air Resources Board Air Quality and Land Use Handbook

The California Air Resources Board (CARB) published a draft version of the *Air Quality and Land Use Handbook* on February 17, 2005, to serve as a general guide for considering impacts to sensitive receptors

from facilities that emit toxic air contaminant (TAC) emissions. The recommendations provided therein are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts. The goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TAC emissions. Some examples of CARB's recommendations include the following: (1) avoid siting sensitive receptors within 500 feet of a freeway, urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day; (2) avoid siting sensitive receptors within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater), or within 50 feet of a typical gas dispensing facility; (3) avoid siting sensitive receptors within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week); and (4) avoid siting sensitive receptors within 300 feet of any dry cleaning operation using perchloroethylene, and for operations with two or more machines provide 500 feet. However, as the project does not involve siting new sensitive land uses, the guidelines are not applicable.

(4) California Air Resources Board Emission Control Measures

In 2004, CARB adopted a control measure to limit commercial heavy duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter (DPM) and other air contaminants.[2] The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. In general, it prohibits idling for more than five minutes at any location.

In addition to limiting exhaust from idling trucks, CARB promulgated emission standards for off-road diesel construction equipment such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. A CARB regulation that became effective on June 15, 2008, aims to reduce emissions by installation of diesel soot filters and encouraging the replacement of older, dirtier engines with newer emission controlled models.[3] A prohibition against acquiring certain vehicles began on March 1, 2009, and a reporting requirement started on April 1, 2009. Implementation of some provisions is staggered based on fleet size, with the largest operators beginning compliance in 2010.

CARB estimates that by 2020, DPM will be reduced by 74 percent and smog forming NO_X (another important pollutant emitted from diesel engines) will be reduced by 32 percent, compared to emissions levels without the regulation. In January 2010, the Associated General Contractors of America filed a petition requesting CARB to adopt an emergency amendment to delay the fleet average target dates of this regulation for a period of two years. Consequently, the following relief was granted: CARB will "not take any enforcement action for noncompliance with the regulation's March 1, 2010 emission standards or other emission related requirements before it receives authorization from U.S. EPA."[4] Because the project would involve heavy diesel vehicle use during construction, it would be subject to the control measures adopted by CARB.

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[2] *Calif. Code of Regulations, Title 13, Sec. 2485. See http://www.arb.ca.gov/regact/idling/idling.htm (accessed July 2008).*

[3] *Calif. Code of Regulations, Title 13, Secs. 2449, 2449.1, 2449.2 and 2449.3.*

[4] *California Regulatory Notice Register, February 2010. http://www.oal.ca.gov/res/docs/pdf/notice/9z-2010.pdf (accessed April 2010).*

(5) Great Basin Unified Air Pollution Control District

The GBUAPCD, which covers the whole GBVAB, has jurisdiction over an area of approximately 13,975 square miles. This area includes all of Inyo, Mono and Alpine counties. The GBUAPCD was formed in 1974 when Inyo, Mono and Alpine Counties formed a joint powers agreement with the purpose of meeting and enforcing applicable Federal, State and local air quality regulations. While air quality in this area has improved, the GBUAPCD requires continued diligence to meet air quality standards.

The GBUAPCD utilizes a permitting process to regulate emissions. The following list includes some of the rules and regulations that may apply to the project:

- GBUAPCD Rule 200-A and 200-B. Permits Required: Before any individual builds or operates anything that may cause the issuance of air contaminants or the use of which may eliminate, reduce or control the issuance of air contaminants, such person must obtain a written authority to construct and permit to operate from an Air Pollution Control Officer.
- GBUAPCD Rules 401 and 402. Fugitive Dust and Nuisance: Rule 401 requires that airborne particles remain at their place of origin under normal wind conditions. Proper mitigation techniques approved by the GBUAPCD must be implemented to ensure that fugitive dust is contained. This does not apply to dust emissions discharged through a stack or other point source. Rule 402 states that any air discharge that may cause injury or detriment, nuisance or annoyance, or damage to any public property or considerable number of people is regulated. This rule discusses the health and safety issues that may interfere with public and private areas surrounding the site.
- GBUAPCD Rules 404-A and Rule 404-B. Particulate Matter and Oxides of Nitrogen: Rule 404-A states that a person shall not discharge from any source whatsoever, particulate matter in excess of 0.3 grains per standard dry cubic foot of exhaust gas. Rule 404-B states that a person shall not discharge from fuel burning equipment having a maximum heat input rate of more than 1.5 billion BTU per hour (gross), flue gas having a concentration of nitrogen oxides calculated as Nitrogen Dioxide (NO_2) in parts per million of flue gas by volume at 3 percent oxygen: 125 ppm with natural gas fuel, or 225 ppm with liquid or solid fuel. Additionally, a person shall not discharge from sources other than combustion sources, nitrogen oxides, calculated as nitrogen dioxide, 250 parts per million (ppm) by volume.

(6) Regional Comprehensive Plan

The GBVAB lies outside of a metropolitan planning organization (MPO). It is identified as an Isolated Rural area, meaning that its emissions are not part of an emissions analysis of any MPO's transportation plan or Transportation Improvement Program. Therefore, there is no regional plan to guide growth and transportation issues in the area.

The project site is located within Inyo County. Since this area is located in an Isolated Rural Area, it is not subject to regional planning issues. Therefore, project implementation would have no impact with respect to a Regional Comprehensive Plan.

(7) Inyo County 2001 General Plan

The project is located in the Owens Valley planning area of Inyo County, which is in "serious nonattainment" for PM10 under both State and Federal designations. The county is "unclassified" (state designation) and "unclassifiable/attainment" for all other criteria (common) pollutants addressed by the Clean Air Act. The status of various criteria pollutants in Inyo County is shown on Table 3.3-3.

The proposed project is subject to the following air quality-related goals and policies of the Inyo County 2001 General Plan:

Public Safety Element of the General Plan Goals and Policies

Air Quality

Goal AQ-1. Provide good air quality for Inyo County to reduce impacts to human health and the economy.

- **Policy AQ-1.1. Regulations to Reduce PM10.** Support the implementation of the State Implementation Plan and the agreement between GBUAPCD and the LADWP [Los Angeles Department of Water and Power] to reduce PM10.
- **Policy AQ-1.2. Attainment Programs.** Participate in the GBUAPCD's attainment programs.
- **Policy AQ-1.3. Dust Suppression During Construction.** Require dust-suppression measures for grading activities.
- **Policy AQ-1.4. Energy Conservation.** Encourage the use of energy-conservation devices in public and private buildings.
- **Policy AQ-1.5. Monitor Regional Development.** Publicly object to development proposals within the region that do not adequately address and mitigate air quality impacts, especially fugitive dust.

b. Existing Conditions

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in the prevalent air quality.

The following pollutants are regulated by the EPA and, therefore, are subject to emission reduction measures adopted by federal, state and other regulatory agencies.

Ozone (O_3): Ozone is a secondary pollutant formed by the chemical reaction of volatile organic compounds and nitrogen oxides (NO_X) under favorable meteorological conditions such as high temperature and stagnation episodes. An elevated level of ozone irritates the lungs and breathing passages, causing coughing, and pain in the chest and throat thereby increasing susceptibility to respiratory infections and reducing the

ability to exercise. Effects are more severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower the lung efficiency.

Carbon Monoxide (CO): Carbon monoxide is primarily emitted from combustion processes and motor vehicles because of incomplete combustion of fuel. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of moderate levels of carbon monoxide can cause nausea, dizziness, and headaches, and can be fatal at high concentrations.

Nitrogen Oxides (NO_X): Major sources of NO_X include power plants, large industrial facilities, and motor vehicles. Nitrogen oxides are emitted from combustion processes and irritate the nose and throat. It increases susceptibility to respiratory infections, especially in people with asthma. The principal concern of NO_X is as a precursor to the formation of ozone.

Sulfur Dioxide (SO_2): Major sources of SO_2 include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of sulfur dioxide aggravate lung diseases, especially bronchitis. It also constricts the breathing passages, especially in asthmatics and people involved in moderate to heavy exercise. Sulfur dioxide potentially causes wheezing, shortness of breath, and coughing. High levels of particulate appear to worsen the effect of sulfur dioxide, and long-term exposures to both pollutants leads to higher rates of respiratory illness.

Lead (Pb): Lead is emitted from industrial facilities and from the sanding or removal of old lead-based paint. Smelting or processing the metal is the primary source of lead emissions, which is primarily a regional pollutant. Lead affects the brain and other parts of the body's nervous system. Exposure to lead in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

Particulate Matter (PM_{10} and $PM_{2.5}$): The human body naturally prevents the entry of larger particles into the body. However, small particles, with an aerodynamic diameter equal to or less than ten microns (PM_{10}) and even smaller particles with a aerodynamic diameter equal to or less than 2.5 microns ($PM_{2.5}$), are trapped in the nose, throat, and upper respiratory tract. These small particulates enter the body and could potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM_{10} and $PM_{2.5}$. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulate could become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids.

"Fugitive dust" is atmospheric dust resulting from both natural and anthropogenic disturbance of soil and other granular material. Fugitive dust particles are comprised mainly of soil minerals (i.e. oxides of silicon, aluminum, calcium, and iron), but can also consist of sea salt, pollen, spores, etc. The most common regulated forms of particulate matter are known as PM_{10} (particulate matter with a diameter of 10 microns or less in size) and $PM_{2.5}$ (particulate matter with a diameter of 2.5 microns or less in size).

PM_{10} is predominately comprised of windblown dust or other operations involving solid particulate materials. $PM_{2.5}$ is more likely the result of fuel combustion and photochemical reactions. $PM_{2.5}$ is both

directly emitted and formed via chemical reactions in the atmosphere from precursor pollutants such as NO_X, SO_X, and ammonia. However, most fugitive dust particles are larger than PM_{10} particulates and thus would not comprise either PM_{10} or $PM_{2.5}$.

PM_{10} may accumulate in the lungs and irritate the respiratory tract, and may also lead to eye irritation, but fine particles ($PM_{2.5}$) are more likely than larger PM_{10} particles to contribute to health effects. The CARB and the USEPA have recognized adverse health effects that may be associated with exposure to PM, including:

- Increased respiratory symptoms, such as the irritation of the airways, coughing, or difficulty breathing;
- Decreased lung function, particularly in children;
- Aggravated asthma;
- Development of chronic bronchitis;
- Irregular heartbeat;
- Increased respiratory and cardiovascular hospitalizations;
- Premature death in people with heart or lung disease.

Based on reviews of the latest scientific literature, CARB staff has concluded that exposure to $PM_{2.5}$ has potential health impacts. In recognition, the USEPA and CARB have established NAAQS and CAAQS for PM emissions. The NAAQS and CAAQS have been set at levels considered safe to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly with a margin of safety.

Short-term exposure to fugitive dust during construction typically will not result in any considerable health effects. Health risk methodologies for operational impacts typically assume a conservative continuous exposure of 24-hours per day, for a 70-year lifetime, outdoors at the same location. In contrast, exposure during construction is substantially reduced because of the temporary nature of construction and because construction activities primarily occur during normal working hours. As a result of the limited exposure, health effects from fugitive dust during construction are minimized. Air quality standards and GBUAPCD thresholds are developed for the purpose of protecting the health of sensitive populations.

(1) Local Area Conditions

(a) Meteorology and Pollutant Levels

The project site is located in Inyo County. The average minimum temperature is in the upper 20s (degrees Fahrenheit), while the average maximum temperature is in the mid- to high 70s. Most of the precipitation in this area (approximately 70 percent) occurs between November and February. Spring is the windiest season, with fast-moving northerly weather fronts. During the day, southerly winds result from the strong solar heating of the nearby mountain slopes, causing upslope circulation. Summer winds are northerly at night as a result of cool air draining from higher to lower elevations.

The extent and severity of the air pollution problem in the GBVAB is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). The Inyo County portion of the GBVAB has a non-attainment status for ozone (State standards

only); non-attainment of ozone is associated with the effect of transported pollution from outside of Inyo County, rather than local generation of ozone or ozone precursors. All of the GBVAB is designated non-attainment for the PM_{10} State standard.

Although Inyo County is categorized as non-attainment for the State ozone standard, there is no ozone implementation plan for attainment in Inyo County, nor is one required under State law. As outlined in the 2001 CARB Ozone Transport Review, the CARB classifies the contribution of transported pollution from one air basin to another to be either overwhelming, significant, inconsequential, or some combination of the three. The CARB Ozone Transport Review is a statewide assessment of ozone transport between air basins. According to the CARB, ozone levels would improve in the air basin only when substantial mitigation measures are more fully implemented in upwind air basins.

Owens Dry Lake, the remnant of a prehistoric lake in Owens Valley, is located adjacent to the project site to the east. Through both natural and anthropogenic means, the lake has been dry for most of the 20th century. The exposed lakebed is a major source of dust in southern Owens Valley, causing violations of Federal PM10 standards. Since 1998, the GBUAPCD has been working with the City of Los Angeles under a Memorandum of Agreement (MOA) to mitigate dust emissions resulting from Owens Lake. The MOA has been formally included in the GBUAPCD's air quality control plan since 1999 and has resulted in the LADWP's Owens Lake Dust Mitigation Program.

(b) Existing Pollutant Levels at Nearby Monitoring Stations

Air quality is monitored by the GBUAPCD at a number of locations throughout the Basin. Currently, there are 19 monitoring sites in the GBVAB. The monitoring station most representative of the project area is the Olancha-Walker Creek Monitoring Station. This monitoring station is located at 131 Walker Creek Road in Olancha, approximately 3.13 miles southeast of the project site. Only PM_{10} is monitored at this station. Although there has been no ozone monitoring in Inyo County since 2002, the County continues to be designated a non-attainment area for the state ozone standard. However the air basin is designated as "attainment" for the federal 8-hour O_3 standard. The most recent data available from this monitoring station which has been reviewed and summarized by the GBUAPCD encompasses the years 2007 to 2011. The data shown in **Table 4.B.1-3**, *Pollutant Standards and Ambient Air Quality Data from Representative Monitoring Stations*, indicate the following pollutant trends:

Particulate Matter, PM_{10}. The area is in non-attainment for PM_{10}. The highest average 24-hour PM_{10} concentration was 650 $\mu g/m^3$, recorded in 2009. California statistics are not available since this station uses monitoring equipment consistent with federal requirements (national). State statistics must be collected using California approved samplers.

(c) Existing Emissions

The project is located on the Cabin Bar Ranch. The majority of the ranch is currently non-operational, but is currently maintained by the Applicant. Existing on-site buildings and structures on the ranch include two vacant single-family homes, a former model home and several concrete ponds built as part of an unrealized residential development, a mobile home currently occupied by a caretaker, and a barn/former metalworking shop. The former model home is currently maintained by the Applicant and used by visiting employees for short stays. Utilities, including wastewater, water supply, and telephone lines, were installed beneath Cabin

Table 4.B.1-3

Pollutant Standards and Ambient Air Quality Data from Representative Monitoring Stations

Pollutant Standard and Data	Maximum Recorded Daily Concentration				
	2007	2008	2009	2010	2011
Particulate Matter (PM_{10})					
24-Hour: C=50 μg/m³; N=150 μg/m³	114 μg/m³	357 μg/m³	650 μg/m³	577 μg/m³	642 μg/m³
% of Samples[e] > Calif. Standard	N/A	N/A	N/A	N/A	N/A
% of Samples[e] > National Standard[a]	0%	2%	2%	6%	3%

C = California ambient air quality standard; N = national ambient air quality standard;; μg/m3 = micrograms per cubic meter; N/A = not applicable; -- = not available or not reported.

[a] *At this monitoring station, PM_{10} samples were collected every six days; each reflects a six-day period.*

Source: Data obtained from GBUAPCD and ARB's ADAM Database, accessed April 2012. http://www.arb.ca.gov/adam/topfour/topfourdisplay.php

Bar Ranch Road at the time of its construction, but the wastewater and water supply lines were never activated and are not currently in use. The former model home is currently served by a septic system and electricity is provided via an above-ground LADWP power line originating east of the project site. An underground water line connects domestic well CBR-1 to the existing model home. CBR-1 is currently the only active well on the project site. However, three other idle wells exist on the project site which have been tested for future production use. Emissions from current maintenance activities are expected to be minimal.

Cabin Bar Ranch was operated as a cattle ranch from the 1860s until the property was purchased by the Applicant and additionally supported alfalfa production starting in the 1970s. In 1982, a 17.90-acre area in the north-central portion of the ranch was subdivided into 16 lots for the planned construction of single-family homes; only one of the lots was ultimately developed. Large areas of the ranch east of US 395 were once irrigated to support the growth of grasses for cattle grazing. This irrigation system is no longer active, and the remainder of Cabin Bar Ranch on both sides of US 395 is now populated by sagebrush scrub.

(d) Sensitive Receptors

The California Environmental Protection Agency and CARB consider some population groups as more sensitive to air pollution than others.[5] These include children, the elderly, and acutely and chronically ill persons (especially those with cardio-respiratory diseases) who are collectively referred to as sensitive receptors. Sensitive land uses are those most frequently used by sensitive receptors, including homes, schools, hospitals and care facilities. The closest sensitive receptors to the project site are residential uses located approximately 300 feet north of the project site.

[5] *California Environmental Protection Agency and California Air Resources Board, "Air Quality and Land Use Handbook: A Community Health Perspective," April 2005.*

2. ENVIRONMENTAL IMPACTS

a. Significance Thresholds

The Inyo County General Plan establishes the general goal of providing good air quality in Inyo County and identifies policies intended to achieve this goal. However, neither Inyo County nor the GBUAPCD have established numerical significance thresholds for quantitatively determining air quality impacts. Appendix G of the State *CEQA Guidelines* contains the Environmental Checklist used to determine potential impacts in the Initial Study prepared for the proposed project (contained in **Appendix A** of this Draft EIR). Based on the Environmental Checklist, the proposed project would normally have a potentially significant impact on air quality if it would:

AQ-1: Conflict with or obstruct implementation of the State Implementation Plan (SIP) for the Owens Valley PM10 Planning Area.

AQ -2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

AQ-3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

AQ-4: Expose sensitive receptors to substantial pollutant concentrations.

AQ-5: Create objectionable odors affecting a substantial number of people.

CEQA allows Lead Agencies to rely on standards or thresholds promulgated by other agencies. Thus, the GBUAPCD has recently allowed use of the numerical standards of the Mojave Desert AQMD in prior CEQA reviews (such as the Rock Creek Canyon Specific Plan EIR, Mono County, July 2010). Because the air quality and pollutant attainment status in portions of the Mojave Desert Air Basin (MDAB) are similar to those of the GBVAB, the numerical thresholds set for MDAB are considered adequate to serve as significance thresholds for the proposed project. The significance criteria discussed below are recommended to translate the State *CEQA Guidelines* thresholds into numerical values or performance standards.

(1) Construction Emissions

The GBUAPCD considers short-term construction equipment exhaust emissions to be less than significant. However, since the air basin is within the Owens Valley PM10 Planning Area, fugitive dust emissions from construction must be mitigated. Therefore, construction emissions, including TAC emissions from construction activities, are therefore evaluated qualitatively in the context of the significance thresholds identified above.

(2) Operational Emissions

Project operations would have a significant impact on air quality if any of the following would occur:

- Operational emissions from both direct and indirect sources would exceed any of the following prescribed threshold levels: (1) 137 pounds per day for NO_X, (2) 137 pounds a day for VOC, (3) 82 pounds per day for PM_{10}, (4) 82 pounds per day $PM_{2.5}$, (5) 550 pounds per day for CO, and (6) 137 pounds per day for SO_X.[6]

The proposed project does not involve the introduction of permanent, continuous, or stationary sources of TAC emissions. Mobile source operational emissions of TACs are therefore evaluated qualitatively in the context of the significance thresholds identified above.

b. Methodology

(1) Construction Impacts

Construction generates pollutant emissions both on- and off-site. On-site construction emissions include exhaust emissions from diesel-powered equipment, volatile emissions from paint, construction materials, and asphalt, and fugitive dust generated by demolition, moving earth and driving on unpaved surfaces. Off-site emissions include diesel exhaust, tire wear and brake wear particulates from construction vehicles making their way to and from the project site, and vehicle exhaust, tire and brake wear particulates from vehicles used for worker commuting.

Analysis of construction emissions was performed qualitatively. The GBUAPCD does not require quantification of emissions from construction activities but requires certain mitigation measures to be implemented. The analysis evaluates project compliance with GBUAPCD mitigation requirements for construction emissions.

(2) Operational Impacts

The analysis of a project's impact on regional air quality during long-term project operations typically considers three types of sources: mobile, area and stationary. Mobile sources are off-site vehicle trips. Area sources involve multiple similar emissions on-site, such as the consumption of natural gas or wood (for hot water and heat) or other fossil fuel (landscaping equipment, generators, etc.), and use of consumer products that contain volatiles and solvents. Stationary sources include off-site generation of electricity used on-site for the project.

Analysis of operational emissions was performed quantitatively. Emissions were calculated using the URBEMIS2007 model. The URBEMIS2007 model calculates emissions from vehicle trips generated from employees and delivery trucks using the CARB OFFROAD2007 model as well as energy usage including natural gas. Emissions generated from operation of the project are not expected to generate significant amounts of fugitive dust that would obstruct implementation of the SIP.

(3) Toxic Air Contaminants

The potential for sensitive receptors to be exposed to TAC emissions was analyzed in accordance with CARB land use siting recommendations, as discussed previously. Therefore quantitative analysis of potential TAC

[6] *http://www.mdaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=1456*

impacts from the project is not warranted. TAC impacts are analyzed qualitatively for consistency with CARB land use siting recommendations.

c. Project Features

The following Project Design Features are incorporated into the project to avoid, reduce or offset potential significant environmental impacts, as reflected in the project proposal materials, including the proposed General Plan Amendment and zoning change:

1. The project will be constructed in a manner that incorporates sustainable building and design practices, recycling efforts and other conservation methods in order to seek a Green or Certified LEED certification, which would reduce air quality and greenhouse gas emissions. These will include the following project features:

    - Prior to project buildout, the project will construct a rooftop solar photovoltaic array as part of the water bottling facility, in order to further reduce electricity consumption of the water bottling.
    - The project would provide an employee shuttle as a form of alternative transportation.
    - The project would provide preferential parking for low-emissions and fuel-efficient vehicles.
    - The project would reduce the "heat island effect" with the use of concrete in the parking areas and high SRI roofing (light-colored roof).
    - The project will implement an enhanced recycling program.
    - The project will install site lighting designed to meet LEED requirements for the Light Pollution Reduction credit for industrial projects.

d. Analysis of Project Impacts

The analysis of the project's air quality impacts applies to project construction and operations.

AQ-1: Would project implementation conflict with or obstruct implementation of the State Implementation Plan (SIP) for the Owens Valley PM10 Planning Area?

Pursuant to the CAA, the GBUAPCD is required to reduce emissions of criteria pollutants for which the Great Basin is in non-attainment. Because the project is located within a nonattainment area, certain project-related activities may be subject to emission control strategies contained within the Owens Valley Planning Area PM10 SIP.

Construction would involve activities that can result in emissions of particulate matter. Site preparation prior to building construction would require earthmoving such as grading and trenching. Implementation of Mitigation Measures 4.B.1-A through F will minimize PM emissions, in accordance with applicable Rules, ordinances, plans, and policies during construction. Furthermore, the project, with mitigation, would be consistent with General Plan policies AQ-1.1 (Regulations to Reduce PM_{10}), AQ-1.2 (participation in the GBUAPCD's attainment programs), and AQ-1.3 (Dust Suppression During Construction).

The proposed project is expected to employ up to 50 people. The increase in the number of employees is consistent with growth projections for the region upon which the SIP is based. The SIP does not contain PM10 reduction measures applicable to the routine operations of the proposed project, and project implementation would not conflict with the SIP. Furthermore, the project would incorporate design features to reduce energy consumption (such as an employee shuttle and "cool roof") and would partially rely on on-site renewable energy generation, consistent with General Plan Policy AQ-1.4 (Energy Conservation). Therefore, construction and operation of the project would not obstruct implementation of the SIP.

AQ-2: Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

(1) Construction Impacts

Construction of the projects has the potential to impact air quality through the use of heavy construction equipment, earth-moving activities, and through vehicle trips of construction workers traveling to and from the project site. In addition, fugitive dust emissions would result from construction activities. Mobile source emissions, primarily PM and NO_X, would result from the use of construction equipment such as bulldozers, loaders, and cranes. Construction emissions can vary from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources.

Construction of the project would include the 198,500-square-foot spring water bottling plant and an approximately 40,000-square foot storage warehouse. Ancillary uses to the bottling facility would include a rooftop solar array, a fire suppression building, a proposed storm water retention basin, a leach mound, a fire access road encircling the bottling facility, and a parking and truck staging area. Additionally, a new permanent access road from US 395 would be constructed approximately 2,500 feet south of the existing Cabin Bar Ranch Road.

Construction would occur over three separate phases occurring over a period of up to 15 years. Phase I and II would construct the bottling facility and remove the two existing vacant single-family homes. Phase I of construction would also develop the new permanent access road, storm water retention basin, fire suppression building and leach mound system. Phase III would construct the 40,000 square-foot warehouse.

Construction of the project will require earthwork and grading to prepare the site, building erection, architectural coatings (painting), asphalt and paving and infrastructure improvements. Equipment to be used during the site preparation process includes graders, tractors, backhoes, bulldozers and excavation equipment. Building construction and erection will require equipment such as cranes, forklifts, aerial lifts, air compressors and concrete saws. Asphalt paving will require equipment such as pavers and rollers. In addition to on-site equipment, worker trips and haul trucks travelling to and from the site generate emissions in the region. However, the GBUAPCD considers short-term construction exhaust emissions to be less than significant and quantification is not necessary.

In addition to exhaust emissions, the project will generate fugitive dust through earthwork and grading. Approximately 14.59 acres of the site will be disturbed during construction which will generate fugitive dust and increase PM10 concentrations in the area. GBUAPCD CEQA guidance does not require quantification of

fugitive dust to make a significance determination. The GBUAPCD maintains that all fugitive dust emissions from construction activities represent a potentially significant but mitigable impact. Construction-related dust is addressed in GBUAPCD Rule 400 and 401. With implementation of mitigation measures AQ-1 through AQ6, which will ensure compliance with GBUAPCD Rule 400 and 401 through such dust control measures as track-out prevention devices (i.e. wheel washers, shaker plates, street sweeping), watering of exposed surfaces and stockpiles, and replacing ground cover after excavation, fugitive dust emissions resulting from construction activities would be less than significant.

(2) Operation Impacts

Operation of the project will generate emissions through on-site equipment, vehicle trips, energy usage (natural gas, electricity), water usage and waste generation. The project is expected to require several pieces of equipment such as forklifts for moving product. Vehicle trips would be generated mainly from employees and trucks transporting finished product. As mentioned previously, the project will employ up to 50 people which will not generate a significant amount of mobile source emissions. Emissions from truck trips delivering product are also included in the emissions calculation. Energy usage for bottling operations and refrigeration will be typical of light industrial uses and would not generate significant stationary source emissions.

As shown in **Table 4.B.1-4**, *Maximum Incremental Increase in Project-Related Operational Emissions*, long-term operational emissions would not exceed numeric thresholds. As a result, impacts would be less than significant with regard to regional operational emissions.

Table 4.B.1-4

Maximum Incremental Increase in Project-Related Operational Emissions
(Pounds per Day)

Emission Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Project						
Mobile	2	7	10	0	2	1
Area [a]	2	2	4	0	0	0
Total	**4**	**9**	**14**	**0**	**2**	**1**
MDAQMD Significance Threshold	137	137	548	137	82	82
Difference	**(133)**	**(128)**	**(534)**	**(137)**	**(80)**	**(81)**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

[a] *Area source emissions are calculated using the URBEMIS 2007 emissions model. Area sources include natural gas consumption, landscape fuel consumption, consumer products and miscellaneous sources (e.g., commercial solvent usage, architectural coatings).*

*Numbers may not add up exactly, due to rounding. Worksheets and modeling output files are provided in **Appendix B** of this Draft EIR.*

Source: PCR Services Corporation, 2012.

Therefore, impacts would be less than significant with regard to operational emissions.

AQ-3: Would the project result in a cumulatively considerable net increases of any criteria pollutant for which the project region is in non-attainment for air quality impacts, based on the applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

A significant impact would occur if the project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. For the project site, nonattainment pollutants include ozone (NOx and VOC emissions from the project are precursors to ozone formation in the atmosphere) and PM_{10}.

Implementation of the project would result in a temporary increase in emissions from construction, but control measures will be implemented to reduce emissions. Long-term NOx, VOC, and PM_{10} emissions resulting from project operations are below applicable thresholds, negligible when compared to regional emissions, and consistent with goals established in the Inyo County General Plan Air Quality Element. Therefore, the project would not contribute to a cumulatively considerable net increase in nonattainment pollutants.

AQ-4: Would the project expose sensitive receptors to substantial pollutant concentrations?

(1) Construction Impacts

Sensitive receptors are located approximately 300 feet north of the project site. PM_{10} and $PM_{2.5}$ emissions are expected to occur primarily during site mass grading and excavation activities and grading and, to a lesser degree, during fine grading and paving for site improvements. Rule 401 requires that airborne particles remain on the site from which they originate under normal wind conditions. Proper mitigation techniques must be implemented to ensure that fugitive dust is contained. As discussed above, emissions from project construction are not expected to expose even the closest sensitive receptors to substantial pollutant concentrations.

In addition to criteria and precursor pollutants, TAC emissions are also created by the combustion of fossil fuels. Diesel Particulate Matter (DPM) has been recognized by the State of California as a human carcinogen for over 10 years. Diesel powered equipment would be used during grading and excavation activities and, as such, DPM is of potential concern because of its toxicity and prevalence in emission exhaust. The Office of Environmental Health Hazard Assessment (OEHHA) recognizes the potential for carcinogenic and non-cancer long-term effects in humans from exposure to DPM and has developed a methodology for estimating health risk from TAC pollutants such as diesel exhaust. No non-cancer acute (short-term) effects have been recognized for DPM.

OEHHA cancer risk factors assume a continuous exposure over a 70-year time frame; however, the proposed priority projects would require (at most) one year of construction, and would be spread out sporadically as funding becomes available over the course of ten years or more. Neither OEHHA nor the GBUAPCD have developed guidelines to accurately and scientifically estimate the incremental increase in cancer risk for such short exposure duration. Additionally, the GBUAPCD does not require a health risk assessment for short-term construction emissions. Therefore, it is not meaningful to evaluate long-term cancer impacts

from construction activities which occur over a short duration. In addition, there would be no residual emissions after construction and, thus, no corresponding individual cancer risk. As such, project-related toxic air contaminant emission impacts during construction would be less than significant.

(2) Operational Impacts

Operational emissions have the potential to impact local air pollutant levels at nearby receptors. An increase in vehicular travel may generate localized "hot spots," localized areas in the project vicinity where sensitive receptors (pedestrians) located near to roadways and intersections may be exposed to elevated ambient pollutant levels. However, according to Section 4.I Transportation, the project would generate approximately 256 one-way trips per day, including 160 one-way heavy duty truck trips. The number of peak hour trips is expected to reach as high as 38 trips and is not predicted to result in LOS below C. Therefore, localized impacts from operation would be less than significant and no further analysis is necessary.

AQ-5: Would the project create objectionable odors affecting a substantial number of people?

(1) Construction Impacts

Potential sources of odors during construction activities include architectural coatings and solvents. In addition to coatings and solvents, diesel exhaust from construction equipment has the potential to cause odor impacts. However, with compliance with mandatory GBUAPCD Rule 402 (Nuisance), no construction activities or materials are anticipated to result in objectionable odors. Therefore, no impact would occur and no mitigation measures would be required.

(2) Operational Impacts

The project is not expected to generate nuisance odors during operational activities. CARB ATCM 2485 limits idling to no more than 5 minutes, thereby minimizing the potential for impacts from diesel exhaust. The process of bottling water does not involve industrial processes suspected of generating odorous emissions, such as bakeries. Therefore, no impact would occur and no mitigation would be required.

3. MITIGATION MEASURES

With mandatory compliance with applicable Rules governing dust emissions and implementation of the proposed Project Design Features for project operation, project construction and operation would result in less than significant air quality impacts. The following mitigation measures represent specific air pollution control strategies designed by the GBUAPCD to implement the Rules applicable to the proposed project.

a. Construction

The following mitigation measures are included to ensure project compliance with GBUAPCD Rule 401, which requires that excessive fugitive dust emissions be controlled by regular watering or other dust preventive measures, as specified in the GBUAPCD Rules and Regulations, and GBUAPCD Rule 402, which requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Implementation of the following measures would reduce short-term fugitive dust impacts on nearby sensitive receptors to the maximum extent feasible:

Mitigation Measure AQ-1: All active portions of the construction site shall be watered to prevent excessive amounts of dust.

Mitigation Measure AQ-2: On-site vehicles' speed shall be limited to 15 miles per hour (mph).

Mitigation Measure AQ-3: All on-site roads shall be paved as soon as feasible or watered periodically or chemically stabilized.

Mitigation Measure AQ-4: All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust; watering, with complete coverage, shall occur at least twice daily, preferably in the late morning and after work is done for the day.

Mitigation Measure AQ-5: If dust is visibly generated that travels beyond the site boundaries, clearing, grading, earth moving or excavation activities that are generating dust shall cease during periods of high winds (i.e., greater than 25 mph averaged over one hour) or during Stage 1 or Stage 2 smog episodes.

Mitigation Measure AQ-6: All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.

b. Operation

Impacts are less than significant, no mitigation measures are necessary.

4. CUMULATIVE IMPACTS

Three related projects have been identified in the project area, including Caltrans' proposed widening and realignment of US 395, Rio Tinto Trona mining within Owens Lake, and expansion of the Duck Club north of Cartago. Under the Caltrans project, the existing US 395 alignment adjacent to Cabin Bar Ranch would become a frontage road to the new US 395 alignment. However, construction of the Caltrans project is not anticipated to begin until 2016.

a. Construction

The GBUAPCD does not have numeric thresholds to determine whether the project would result in a cumulatively considerable net increase of PM_{10} or O_3 precursors. The project proponent does not have control over the timing or sequencing of the related projects. Therefore, any quantitative analysis to ascertain daily construction emissions that assumes multiple and concurrent construction projects would be highly speculative. Furthermore, as discussed above, O_3 impacts are primarily the result of pollution generated in the San Joaquin Valley and emissions of ozone precursors generated locally have little influence on ground level ozone concentrations within the GBVAB.

With respect to the project's construction-related PM_{10} emissions and cumulative Basin-wide conditions, the GBUAPCD has developed strategies to reduce criteria pollutant emissions pursuant to CAA mandates. Accordingly, the project and the related projects would comply with GBAUPCD Rule 200-A, 200-B, Rules 401 and 402, and implement feasible PM mitigation measures. In addition, the project and related projects

would comply with adopted Air Quality Element emissions control measures and as such would not contribute to localized impacts at nearby sensitive receptors. Thus, project construction emissions, considered together with those of the related projects, would constitute a less than cumulatively considerable contribution to cumulatively significant air quality impacts.

b. Operation

The GBUAPCD's approach for assessing cumulative impacts related to operations is based on the attainment of ambient air quality standards in accordance with the requirements of the Federal and State Clean Air Acts.

A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. Because the Basin is currently in nonattainment for O_3 and PM_{10}, related projects could exceed an air quality standard or contribute to an existing or projected air quality exceedance. Cumulative impacts to air quality are evaluated under two sets of thresholds for CEQA. In particular, CEQA Guidelines Sections 15064(h)(3) provide guidance in determining the significance of cumulative impacts. Specifically, Section 15064(h)(3) states in part that:

> *A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem (e.g., water quality control plan, air quality plan, integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency…*

For purposes of the cumulative air quality analysis, with respect to CEQA Guidelines Section 15064(h)(3), the project's incremental contribution to cumulative air quality impacts is determined based on compliance with the Inyo County General Plan Air Quality Element and the Owens Valley PM10 Planning Area State Implementation Plan (SIP).

In addition, the project would comply with all rules and regulations as implemented by the GBUAPCD and the CARB, and would conform to the standards and guidelines of the General Plan. Because the project would conform to GBUAPCD and the CARB rules and regulations and conform to General Plan guidelines, the project would be consistent with the Owens Valley PM10 SIP through use of fugitive dust reducing measures.

The GBUAPCD recommends that project-specific air quality impacts be used to determine the potential cumulative impacts to regional air quality. As mentioned previously, operational emissions from the proposed project would not result in significant impacts. In addition, although the specific details of the related projects are not publically available, based on the description of the projects, individually none are expected to result in significant long-term increases in emissions. Therefore, the proposed project, in conjunction with related projects, is not expected to result in a cumulatively considerable contribution to cumulatively significant regional impacts. The related projects are located at considerable distances from the project site, and as such would also not contribute to localized impacts at nearby sensitive receptors. Although the Basin is currently in non-attainment for $PM_{10,}$ the project's incremental contribution to

cumulative air quality effects would be less than significant. Therefore, the project would result in a less than significant impact with regard to consistency with the Owens Valley PM10 SIP.

c. Toxic Air Contaminants

The greatest potential for cumulative TAC emissions is caused by diesel particulate emissions associated with heavy equipment operations during construction. Given that the project's contribution to cancer risk from construction activities would be less than significant and localized, and given the nature of and distance from the related projects, it is reasonable to project that the proposed project, considered together with related projects, would not contribute to significant cancer risks from TAC emissions during construction (duration, transient), and that areas of less than significant elevated cancer risks associated with construction of similar projects would not overlap to create a significant risk. Accordingly, the project's construction phase TAC emissions would not result in a cumulatively considerable contribution to cumulative impacts.

With respect to long-term TAC emissions, neither the project nor any of the identified related projects would represent a substantial source of long-term TAC emissions; uses typically associated with TAC emissions include large-scale industrial, manufacturing, and transportation hub facilities. Based on recommended screening for TAC-source siting distances that are set forth in CARB's Land Use Guidelines, the project, considered together with the related projects, would have a less than cumulatively considerable contribution to cumulative impacts.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

a. Construction

Construction emissions from the proposed project would result in less than significant impacts, with compliance with mandatory GBVAPCD Rules. Since regional and localized construction emissions would not result in a significant impact, the project would not cause a significant impact with regard to AQMP consistency.

b. Operation

During operations, the project would generate emissions through vehicle trips, the operation of on-site equipment, energy consumption, and water consumption. Operational emissions would have a less than significant impact on regional air quality. No significant impacts related to TAC emissions during operation of the project are anticipated to occur either. For these reasons, no air quality mitigation measures are required for project operations.

4.0 ENVIRONMENTAL IMPACT ANALYSIS
B.2 GLOBAL CLIMATE CHANGE

INTRODUCTION

This section addresses greenhouse gas emissions (GHG) associated with construction and operation of proposed Crystal Geyser Roxane Water Bottling Facility Project and the potential for impacts on global climate change. The analysis also addresses the consistency of the project with the policies and goals set forth by the County of Inyo. The analysis of project-generated air emissions focuses on whether the project would cause a significant impact to Global Climate Change.

1. ENVIRONMENTAL SETTING

a. Regulatory Framework

(1) Federal Regulations

In 2007, the US Supreme Court ruled in *Massachusetts v. Environmental Protection Agency* (549 U.S. 497; 127 S. Ct. 1438) that GHGs are air pollutants covered under the Clean Air Act ("CAA"). Since the United States Environmental Protection Agency ("EPA") is responsible for overseeing compliance with the Clean Air Act, emissions of GHGs fall under the jurisdiction of the EPA, which is therefore obligated to regulate them. As of January 2, 2011, the EPA requires GHG analyses to be performed as part of permitting requirements for projects which are currently undergoing the permitting process.

On April 23, 2009, EPA published its Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Clean Air Act (Endangerment Finding) in the Federal Register. The Endangerment Finding is based on Section 202(a) of the Clean Air Act, which states that the Administrator (of EPA) should regulate and develop standards for "emission[s] of air pollution from any class or classes of new motor vehicles or new motor vehicle engines, which in [its] judgment cause, or contribute to, air pollution that may reasonably be anticipated to endanger public health or welfare." The proposed rule addresses Section 202(a) in two distinct findings. The first addresses whether or not the concentrations of the six key GHGs (i.e., carbon dioxide ["CO_2"], methane ["CH_4"], nitrous oxide ["N_2O"], hydrofluorocarbons ["HFCs"], perflurorocarbons ["PFCs"], and sulfur hexafluoride ["SF_6"]) in the atmosphere threaten the public health and welfare of current and future generations. The second addresses whether or not the combined emissions of GHGs from new motor vehicles and motor vehicle engines contribute to atmospheric concentrations of GHGs and therefore the threat of climate change.

The Administrator proposed the finding that atmospheric concentrations of GHGs endanger the public health and welfare within the meaning of Section 202(a) of the CCA. The evidence supporting this finding consists of human activity resulting in "high atmospheric levels" of GHG emissions, which are very likely responsible for increases in average temperatures and other climatic changes. Furthermore, the observed and projected results of climate change (e.g., higher likelihood of heat waves, wildfires, droughts, sea level rise, higher intensity storms) are a threat to the public health and welfare. Therefore, GHGs were found to endanger the public health and welfare of current and future generations.

The Administrator also proposed the finding that GHG emissions from new motor vehicles and motor vehicle engines are contributing to air pollution, which is endangering public health and welfare. The proposed finding cites that in 2006, motor vehicles were the second largest contributor to domestic GHG emissions (24 percent of total) behind electricity generation. Furthermore, in 2005, the United States was responsible for 18 percent of global GHG emissions. Therefore, GHG emissions from motor vehicles and motor vehicle engines were found to contribute to air pollution that endangers public health and welfare.

On May 19, 2009, President Obama announced a new Federal policy "aimed at both increasing fuel economy and reducing GHG pollution for all new cars and trucks sold in the United States." The policy proposed fuel efficiency standards that apply to model years 2012 through 2016. These standards will result in a reduction of approximately 900 million metric tons of GHGs. The new National Fuel Efficiency Policy is expected to increase fuel economy by more than 5 percent by requiring a fleet-wide average of 35.5 miles per gallon by 2016 starting with model years 2012.

(2) State Regulations

In response to growing scientific and political concern regarding global climate change, California adopted a series of laws to reduce both the level of GHGs in the atmosphere and to reduce emissions of GHGs from commercial and private activities within the State. In September 2002, Governor Gray Davis signed Assembly Bill (AB) 1493, requiring the development and adoption of regulations to achieve "the maximum feasible reduction of greenhouse gases" emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State. It should be noted that setting emission standards on automobiles is solely the responsibility of the federal EPA. The federal CAA allows States to set state-specific emission standards on automobiles if they first obtain a waiver from the USEPA. The USEPA initially denied California's request for a waiver, thus delaying CARB's proposed implementation schedule for setting emission standards on automobiles to help reduce GHGs. However, on June 30, 2009, the USEPA granted the waiver to California for GHG emission standards for motor vehicles beginning with the 2009 model year.

In June 2005, Governor Schwarzenegger signed Executive Order S-3-05, which established GHG emissions targets for the state, as well as a process to ensure the targets are met. The order directed the Secretary of the California EPA to report every two years on the State's progress toward meeting the Governor's GHG emission reduction targets. As a result of this executive order, the California Climate Action Team (CAT), led by the Secretary of the California EPA, was formed. The CAT is made up of representatives from a number of State agencies and was formed to implement global warming emission reduction programs and reporting on the progress made toward meeting statewide targets established under the Executive Order. State agency members include the Business, Transportation and Housing Agency; Department of Food and Agriculture; Resources Agency; Air Resources Board; California Energy Commission; the Public Utilities Commission; and Department of Water Resources. The CAT published its Climate Action Team Report to Governor Schwarzenegger and the Legislature in March 2006, in which it laid out forty-six specific emission reduction strategies for reducing GHG emissions and reaching the targets established in the executive order.

In September 2006, Governor Schwarzenegger signed the California Global Warming Solutions Act of 2006, also known as AB 32, into law. AB 32 commits the State to achieving the following:

- 2000 GHG emission levels by 2010, which represents an approximately 11 percent reduction from business as usual (BAU).
- 1990 levels by 2020, approximately 28.5 percent below BAU.
- 80 percent below 1990 levels by 2050.

To achieve these goals, AB 32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. The following schedule outlines the CARB actions mandated by AB 32:

- January 1, 2008, CARB adopted regulations for mandatory GHG emissions reporting, defines 1990 emissions baseline for California (including emissions from imported power), and adopts it as the 2020 statewide cap. CARB adopted 427 million metric tons of carbon dioxide equivalent ($MMTCO_2e$) as the total statewide greenhouse gas 1990 emissions level and the 2020 emissions limit in 2007.[1]
- January 1, 2009, CARB adopted a plan to effect GHG reductions from significant sources of GHG via regulations, market mechanisms and other actions.[2] CARB approved the AB32 Scoping Plan in December 2008.
- During 2009, CARB drafted rule language to implement its plan and holds a series of public workshop on each measure (including market mechanisms).
- January 1, 2010, early action measures were scheduled to take effect on this date.
- During 2010, CARB, after workshops and public hearings, conducted a series of rulemaking to adopt GHG regulations including rules governing market mechanisms.
- January 1, 2011, CARB completed major rulemakings for reducing GHGs, including market mechanisms. CARB may revise and adopt new rules after January 1, 2011 to achieve the 2020 goal.
- By January 1, 2012, GHG rules and market mechanisms adopted by CARB are scheduled to take effect and become legally enforceable.
- December 31, 2020, the deadline for achieving 2020 GHG emissions cap is on this date.

CARB's list of discrete early action measures that can be adopted and implemented before January 1, 2010 was approved on June 21, 2007. The list focuses on major State-wide contributing sources and industries, not on individual development projects or practices. These early action measures are: (1) a low-carbon fuel standard; (2) reduction of refrigerant losses from motor vehicle air conditioning system maintenance; and (3) increased methane capture from landfills. CARB compiled and released emissions inventory estimates for 1990 through 2004.

[1] *CARB has adopted 427 million metric tonnes of carbon dioxide equivalent (MMTCO2e) as the total statewide greenhouse gas 1990 emissions level and the 2020 emissions limit. See http://www.arb.ca.gov/cc/inventory/1990level/1990level.htm (last visited 04/06/2010).*

[2] *CARB released the Climate Change Proposed Scoping Plan in October 2008, which details the strategies that the State will use to reduce GHG emissions. The Plan was approved at the Board hearing in December 2008.*

A companion bill to AB 32, Senate Bill (SB) 1368, requires the California Public Utilities Commission (PUC) and California Energy Commission (CEC) to establish GHG emission performance standards for the generation of electricity. These standards will generally apply to power generated outside of California and imported into the State.

An additional bill related to AB 32 (SB 97 adopted in August 2007) requires the California Office of Planning and Research (OPR) to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by the California Environmental Quality Act (CEQA). These include, but are not limited to, effects associated with transportation or energy consumption. OPR transmitted these guidelines by the July 1, 2009 deadline, and the Resources Agency certified and adopted the guidelines prior to the January 1, 2010 deadline. The Resource Agency will be required to periodically update the guidelines to incorporate new information or criteria established by the CARB pursuant to AB32.[3] OPR does not identify a threshold of significance for GHG emissions, nor has it prescribed assessment methodologies or specific mitigation measures. The amendments encourage lead agencies to consider many factors in performing a CEQA analysis, but preserve the discretion granted by CEQA to lead agencies in making their own determinations based on substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses.

In November 2008, the California Building Standards Commission established the California Green Building Standards Code (CALGreen) which provides for building projects to reduce environmental impacts and encourage sustainable construction practices. Although CALGreen codes went into effect in 2009, the code was voluntary. As of January 1, 2011, the CALGreen code became mandatory for all new buildings constructed in the state. The CALGreen code establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental quality[4].

There has also been legislative activity by the state that acknowledges the relationship between land use planning and transportation sector GHG emissions. California Senate Bill 375, signed by the Governor on September 30, 2008, links regional planning for housing and transportation with the GHG reduction goals outlined in AB 32. For example, reductions in GHG emissions could be achieved by locating housing closer to jobs, retail, and transit. Under the bill, each metropolitan planning organization (MPO) is required to adopt a sustainable community strategy to encourage compact development so that the region will meet a target, created by CARB, for reducing GHG emissions. In August 2010, CARB released the draft CEQA Functional Equivalent Document (FED) which proposes GHG emission reduction targets specific to each MPO. The CARB recognizes that GHG reduction measures may be unique to certain areas of California where viable GHG reduction measures in one area may not be feasible in another.

Although CARB is tasked with setting GHG reduction targets, there is no regional agency responsible for the regulation of GHG emissions related to global climate change. The Great Basin Unified Air Pollution Control District (GBUAPCD) is the agency principally responsible for comprehensive air pollution control in the Great Basin Valley Air Basin (GBVAB), but lacks the authority to directly regulate factors leading to global

[3] *Senate Bill No. 97, Chapter 185, approved by Governor Schwarzenegger and filed with the Secretary of State, August 24, 2007.*

[4] *California 2010 Green Building Standards code, California Code of Regulations Title 24, Part 11.*

climate change or GHG emission issues associated with plans and new development projects throughout the GBVAB.

Given that the project would directly or indirectly cause GHG emissions during construction and operation, many of the global climate change regulations and plans noted above are applicable to the project.

(3) Inyo County 2001 General Plan

The Inyo County 2001 General Plan includes goals, policies, and implementation measures that address global climate change. The proposed project is subject to the following climate change-related goals and policies:

Land Use Element Goals and Policies

Goal LU-1. Create opportunities for the reasonable expansion of communities in a logical and contiguous manner that minimizes environmental impacts, minimizes public infrastructure and service costs, and furthers the countywide economic development goals. Guide high-density population growth to those areas where services (community water and sewer systems, schools, commercial centers, etc.) are available or can be created through new land development, while providing and protecting open space areas.

- **Policy LU-1.2 New Growth.** The County shall plan to concentrate new growth within and contiguous to existing communities (e.g., Bishop, Big Pine, Independence, Lone Pine) and expand existing infrastructure as needed to serve these areas. As a secondary priority, the County shall plan to accommodate new growth in existing rural residential communities (e.g., Olancha, Charleston View, Mustang Mesa, Starlite Estates) and ensure the appropriate expansion of existing infrastructure as needed to serve these areas.

Circulation Element Goals and Policies

Public Transportation

Goal PT-1. Provide effective, economically feasible, and efficient public transportation in Inyo County that is safe, convenient, efficient, reduces the dependence on privately owned vehicles, and meets the identified transportation needs of the County, with emphasis on service to the transportation disadvantaged.

Bicycles and Trails

Goal BT-1. Encourage and promote greater use of non-motorized means of personal transportation within the region.

b. Existing Conditions

The scientific community's understanding of the fundamental processes responsible for global climate change has improved over the past decade, and predictive capabilities are advancing. While there is an overwhelming consensus among scientists that there is a causal link between GHG emissions and global

climate change, there remain significant scientific uncertainties in the exact relationships and outcomes of various changes. For example, predictions of local effects of climate change, occurrence of extreme weather events, effects of aerosols, changes in clouds, shifts in the intensity and distribution of precipitation, and changes in oceanic circulation remain uncertain. Due to the complexity of the Earth's climate system, the uncertainty surrounding climate change may never be completely eliminated. Because of these uncertainties, there continues to be significant debate as to the extent to which increased concentrations of GHGs have caused or will cause climate change, and with respect to the appropriate actions to limit and/or respond to climate change. In addition, it is impossible to label a single development project as the cause of future specific climate change impacts.

The Intergovernmental Panel on Climate Change (IPCC), in its Fourth Assessment Report (FAR), stated that "it is likely that there has been significant anthropogenic warming over the past 50 years."[5] However, it is impossible to identify a single development project as the cause of future specific climate change impacts due to the global nature of climate change. Also in the FAR, the IPCC holds that the impacts of future climate change will vary across regions. While "large-scale climate events have the potential to cause very large impacts," the impacts of future climate change will be mixed across regions.

According to CARB, some of the potential impacts in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (ARB, 2007). Below is a summary of some of the potential effects reported by an array of studies that could be experienced in California as a result of global warming and climate change:

Air Quality. Higher temperatures, conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thus ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (CEC, February 2006).

Water Supply. Uncertainty remains with respect to the overall impact of global climate change on future water supplies in California. Studies have found that, "Considerable uncertainty about precise impacts of climate change on California hydrology and water resources will remain until we have more precise and consistent information about how precipitation patterns, timing, and intensity will change." (Kiparsky et al. 2003). For example, some studies identify little change in total annual precipitation in projections for California (California Climate Change Center, 2006). Other studies show significantly more precipitation (Climate Change and California Water Resources [DWR 2006]). Even assuming that climate change leads to long-term increases in precipitation, analysis of the impact of climate change is further complicated by the fact that no studies have identified or quantified the runoff impacts such an increase in precipitation would have in particular watersheds (California Climate Change Center, 2006). Also, little is known about how groundwater recharge and water quality will be affected (Id.). Higher rainfall could lead to greater

[5] *Intergovernmental Panel on Climate Change, Fourth Assessment Report, Summary for Policy Makers, 2007.*

groundwater recharge, although reductions in spring runoff and higher evapotranspiration could reduce the amount of water available for recharge (Ibid.).

The California Department of Water Resources (DWR 2006) report on climate change and effects on the State Water Project (SWP), the Central Valley Project, and the Sacramento-San Joaquin Delta concludes that "[c]climate change will likely have a significant effect on California's future water resources . . . [and] future water demand." It also reports that "much uncertainty about future water demand [remains], especially [for] those aspects of future demand that will be directly affected by climate change and warming. While climate change is expected to continue through at least the end of this century, the magnitude and, in some cases, the nature of future changes is uncertain" (DWR, 2006). The relationship between climate change and its potential effect on water demand is not well understood (DWR, 2006). DWR adds that "[i]t is unlikely that this level of uncertainty will diminish significantly in the foreseeable future." Still, changes in water supply are expected to occur, and many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows (Kiparsky 2003; DWR 2005; Cayan 2006, Cayan, D., et al, 2006).

Hydrology. As discussed above, climate changes could potentially affect: the amount of snowfall, rainfall and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise can be a product of global warming through two main processes: expansion of sea water as the oceans warm, and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture. California has a $30 billion agricultural industry that produces half the country's fruits and vegetables. Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater ozone pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thus affect their quality (CCCC, 2006).

Ecosystems and Wildlife. Increases in global temperatures and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists expect that the average global surface temperature could rise 1.0-4.5°F (0.6- 2.5°C) in the next fifty years, and 2.2-10°F (1.4-5.8°C) in the next century, with significant regional variation (EPA 2000). Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Sea level could rise as much as two feet along most of the U.S. coast. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition within communities; and (4) ecosystem processes such as carbon cycling and storage (Parmesan, 2004; Parmesan, C. and H. Galbraith 2004.)

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation and storms. Historical records indicate that global climate changes have occurred in the past due to natural phenomena; however some data indicate that the current

global conditions differ from past climate changes in rate and magnitude. Global climate change attributable to anthropogenic (human) emissions of GHGs is currently one of the most important and widely debated scientific, economic and political issues in the United States and the world. There continues to be significant scientific uncertainty concerning the extent to which increased concentrations of GHGs have caused or will cause climate change, and over the appropriate actions to limit and/or respond to climate change.

GHGs are those compounds in the Earth's atmosphere that play a critical role in determining temperature near the Earth's surface. More specifically, these gases allow high-frequency shortwave solar radiation to enter the Earth's atmosphere, but retain some of the low frequency infrared energy, which is radiated back from the Earth towards space, resulting in a warming of the atmosphere. GHGs include carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor, nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). CO_2 is the most abundant GHG in the atmosphere. GHGs are the result of both natural and anthropogenic activities. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions.

(1) Regional Context

Worldwide anthropogenic emissions of GHG were approximately 40,000 million metric tons of carbon dioxide equivalents (CO_2e), including ongoing emissions from industrial and agricultural sources, but excluding emissions from land use changes (i.e., deforestation, biomass decay) (IPCC, 2007). CO_2 emissions from fossil fuel use accounts for 56.6% of the total emissions of 49,000 million metric tons CO_2e (includes land use changes) and all CO_2 emissions are 76.7% of the total. Methane emissions account for 14.3% and N_2O emissions for 7.9% (IPCC, 2007).[6]

(2) Local Area Conditions

Total U.S. greenhouse gas emissions in 2008 were 6,958 million metric tons CO_2e (USEPA, April 2010), or about 14% of world-wide GHG emissions. Overall, total U.S. emissions have risen by 14 percent from 1990 to 2008. However, U.S. emissions decreased by 2.9 percent (211.3 MMT CO_2e) from 2007 to 2008, due in large part to the record high costs of these fuels that occurred in 2008. Additionally, electricity demand declined in 2008 in part due to a significant increase in the cost of fuels used to generate electricity. The primary GHG emitted by human activities in the United States was CO_2, representing approximately 85.1% of total GHG emissions (USEPA, April 2010). The largest source of CO_2, and of overall GHG emissions, was fossil fuel combustion. Methane (CH_4) emissions, which have declined from 1990 levels, resulted primarily from enteric fermentation associated with domestic livestock, decomposition of wastes in landfills, and natural gas systems. Agricultural soil management and mobile source fossil fuel combustion were the major sources of N_2O emissions. The emissions of substitutes for ozone depleting substances and emissions of HFC-23 (trifluoromethane or CHF_3) during the production of HCFC-22 (chlorodifluoromethane or $CHClF_2$) were the primary contributors to aggregate HFC (hydrofluorocarbon) emissions. Electrical transmission and

[6] *Carbon dioxide equivalent (CO_{2e}) is a quantity that describes, for a given mixture and amount of GHGs, the amount of CO2 (usually in metric tons; million metric tons [megatonne] = MMTCO2E = terragram [Tg] CO2 Eq; 1,000 MMT = gigatonne) that would have the same global warming potential (GWP) when measured over a specified timescale (generally, 100 years).*

distribution systems accounted for most SF6 (sodium hexafluoride) emissions, while PFC (perfluorocarbons) emissions resulted from semiconductor manufacturing as a by-product of primary aluminum production.[7]

The residential and commercial end-use sectors accounted for 21 and 19%, respectively, of CO_2 emissions from fossil fuel combustion in 2008 (USEPA, April 2010). Both sectors relied heavily on electricity for meeting energy demands, with 71 and 79%, respectively, of their emissions attributable to electricity consumption for lighting, heating, cooling, and operating appliances. The remaining emissions were due to the consumption of natural gas and petroleum for heating and cooking. California is a substantial contributor of global GHGs as it is the second largest contributor in the United States and the sixteenth largest in the world (AEP, 2007). Based upon the 2008 GHG inventory data (the latest year available) compiled by the CARB (CARB, 2008), California produced 474 MMT CO_2e. The major source of GHG in California is transportation, contributing 37% of the state's total GHG emissions. Electricity generation is the second largest source, contributing 25% of the state's GHG emissions (CARB, 2008). Most, 85%, of California's 2008 GHG emissions (in terms of CO_2e) were carbon dioxide produced from fossil fuel combustion, with 2.5% from other sources of CO_2, 6.0% from methane, and 2.8% from nitrous oxide (CARB, 2008). California emissions are due in part to its large size and large population. By contrast, California in 2001 had the fourth lowest CO_2 emissions per capita from fossil fuel combustion in the country, due to the success of its energy efficiency and renewable energy programs and commitments that have lowered the state's GHG emissions rate of growth by more than half of what it would have been otherwise (CEC, December 2006).

(3) Existing Emissions

The project is located on Cabin Bar Ranch. The majority of the ranch is currently non-operational, but is currently maintained by the Applicant. Existing on-site buildings and structures on the ranch include two vacant single-family homes, a former model home and several concrete ponds built as part of an unrealized residential development, a mobile home currently occupied by a caretaker, and a barn/former metalworking shop. The former model home is currently maintained by the Applicant and used by visiting employees for short stays. Utilities, including wastewater, water supply, and telephone lines, were installed beneath Cabin Bar Ranch Road at the time of its construction, but the wastewater and water supply lines were never activated and are not currently in use. The former model home is currently served by a septic system, and electricity is provided via an above-ground LADWP power line originating east of the project site. An underground water line connects domestic well CBR-1 to the existing model home. CBR-1 is currently the only active well on the project site. However, three other idle wells exist on the project site which have been tested for future production use. GHG emissions from current periodic maintenance activities are expected to be minimal.

Cabin Bar Ranch was operated as a cattle ranch from the 1860s until the property was purchased by the Applicant and additionally supported alfalfa production starting in the 1970s. In 1982, a 17.90-acre area in the north-central portion of the ranch was subdivided into 16 lots for the planned construction of single-family homes; only one of the lots was ultimately developed. Large areas of the ranch east of Highway 395 were once irrigated to support the growth of grasses for cattle grazing. This irrigation system is no longer active, and the remainder of Cabin Bar Ranch on both sides of Highway 395 is now populated by sagebrush scrub.

[7] *USEPA 2010 U.S. Greenhouse Gas Inventory Report (April 2010).*

2. ENVIRONMENTAL IMPACTS

a. Thresholds of Significance

Appendix G of the *CEQA Guidelines* contains the Initial Study Environmental Checklist form used during preparation of the Project Initial Study (contained in Appendix A of this EIR). The Initial Study Environmental Checklist questions relating to GHG emissions have been utilized as the thresholds of significance in this section. Accordingly, the project may result in a significant impact if it causes one or more of the following to occur:

GCC-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance.

GCC-2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Section 15064.7 of the CEQA Guidelines defines a threshold of significance as an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. CEQA gives wide latitude to lead agencies in determining what impacts are significant and does not prescribe thresholds of significance, analytical methodologies, or specific mitigation measures. CEQA leaves the determination of significance to the reasonable discretion of the lead agency and encourages lead agencies to develop and publish thresholds of significance to use in determining the significance of environmental effects. As discussed previously, the County's 2001 General Plan includes goals, policies, and implementation measures related to global climate change, including encouraging high-density population growth, reducing the dependence on privately owned vehicles, and promoting greater use of non-motorized means of personal transportation. However, neither the GBUAPCD nor the County has yet established specific quantitative significance thresholds for GHG emissions evaluated under CEQA. In the latest CEQA Guidelines, effective March 18, 2010, OPR encourages lead agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. However, the County of Inyo has not yet developed a GHG mitigation plan meeting the Guideline requirements.

Section 15064.7(c) states "when adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies…". Neither Inyo County nor the GBUAPCD have established numerical significance thresholds for quantitatively determining GHG impacts in accordance with the criteria listed above. Because construction will be short-term and temporary, the GBUAPCD considers short-term construction equipment exhaust emissions to be less than significant.

The California Air Pollution Control Officers Association (CAPCOA) released white paper, entitled CEQA and Climate Change, in January, 2008 examines various threshold approaches available to air districts and lead agencies for determining whether GHG emissions are significant, including a number of "non-zero" thresholds for land use development projects. The most conservative (lowest) non-zero numeric threshold suggested by CAPCOA is 900 tons per year, which is what a typical development project of 50 single-family

residential units or 30,000 square feet of office would generate[8]. The latest CEQA Guidelines allows Lead Agencies to determine if a qualitative or quantitative analysis is most appropriate. For projects which are not expected to generate a substantial amount of GHG emissions, the County has determined that a non-numeric threshold may be appropriate for the proposed project. Therefore, the project will be qualitatively assessed for consistency with GHG emissions reduction strategies in support of AB 32.

b. Methodology

AB-32 mandates that State-wide emissions of GHGs (including those from the import of electricity produced elsewhere) be reduced to 1990 levels by 2020, and cut to 20 percent of 1990 levels by 2050. The State's implementing plans and policies demonstrate how that can be achieved even while anticipating substantial growth in the economy and state-wide population. It is therefore important to note that a project-level increase in emissions as compared to current operations on-site is not necessarily inconsistent with the State's goals of reducing overall GHG emissions. Projects which result in a net increase in emissions, but incorporate mandatory or voluntary energy and GHG emission reduction measures, can be considered supportive of the State's goals. As discussed above, the State of California has implemented mandatory building codes with the intent of reducing resource consumption and GHG emissions in new development. In addition, the State has promulgated laws which require automobile manufacturers, fuel refiners, and power producers to meet stringent performance standards, thereby reducing GHG emissions from all sectors of the economy.

The project will result in the generation and emission of GHGs both on-site and off-site. On site, the consumption of natural gas and other fossil fuels (forklifts, vehicles, etc.) will release GHGs into the atmosphere. Employee commute and delivery truck trips will result in GHG emissions within the vicinity of the project. Burning of fossil fuels (coal, oil, or natural gas) to produce the electricity needed will also result in GHG emissions from power plants, possibly located anywhere in the western United States. The analysis will qualitatively demonstrate the strategies by which the proposed project will meet or exceed the performance standards applicable to the various GHG-emitting sources.

c. Project Features

As discussed in **Section 2.0**, *Project Description*, of this EIR, the project includes various design features and objectives that relate to global climate change. The project features that relate to global climate change include the following:

1. The project will be constructed in a manner that incorporates sustainable building and design practices, recycling efforts and other conservation methods in order to seek a Green or Certified LEED certification, which would reduce air quality and greenhouse gas emissions. These will include the following project features

    - Prior to complete buildout, the project will construct a rooftop solar photovoltaic array as part of the water bottling facility, in order to further reduce electricity consumption of the water bottling facility.

[8] *http://www.capcoa.org/wp-content/uploads/downloads/2010/05/CAPCOA-White-Paper.pdf*

- The project would provide an employee shuttle as a form of alternative transportation.
- The project would provide preferential parking for low-emissions and fuel-efficient vehicles.
- The project would reduce the "heat island effect" with the use of concrete in the parking areas and high SRI roofing (light-colored roof).
- The project will implement an enhanced recycling program.
- The project will install site lighting designed to meet LEED requirements for the Light Pollution Reduction credit for industrial projects.

d. Analysis of Project Impacts

The analysis of the project's global climate change impacts applies to all components associated with the project.

GCC-1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance?

The project will be constructed consistent with CALGreen requirements. Such requirements include a construction waste management plan which will require a minimum of 50 percent of non-hazardous waste to be recycled. The waste management plan will also require documentation that construction waste material is diverted from landfills and recycled. CalGreen also requires 100% of excavated soil and land clearing debris to be recycled or reused. Construction emissions are temporary in nature, and are not expected to result in any appreciable long-term increase in ambient GHG levels.

Operation of the project will generate GHG emissions through on-site equipment, vehicle trips, energy usage (natural gas, electricity), water usage and waste generation. The project design is subject to CalGreen codes which specify a minimum energy efficiency requirement and water usage reduction, which serve to reduce GHG emissions towards achieving AB 32 targets. The project will also implement voluntary project features such as incorporation of on-site photovoltaic generation, cool roofs, alternative transportation (shuttles) and enhanced recycling which further reduces operational GHG emissions. The majority of the electricity needed for bottling operations will be obtained from the local power provider (LADWP) which is now subject to the Renewable Portfolio Standard requiring 33 percent of all power provided be from renewable sources (which result in lower GHG emissions than traditional fossil fuels) by 2020.

On-road vehicle trips would be generated mainly from employees and trucks transporting finished product. As mentioned previously, the project will employ up to 50 people and as such will not generate a substantial amount of mobile source emissions. The project will generate up to 240 one-way trips on a daily basis including employees and delivery trucks. It is important to note that the project will expand local bottling capabilities, which unto itself does not create increased demand for the products. Therefore, it may be a gross over estimation to assume that all emissions from this plant represent new emissions; the proposed project may result in a reduction in miles traveled to deliver finished product, if, for example, it replaces supply which is currently transported longer distances from demand. Nonetheless, the project will also be subject to the CARB Air Toxics Control Measure (ATCM) which limits idling to no more than 5 minutes, thereby reducing emissions from haul trucks during construction and delivery trucks during operations.

Since the project is consistent with CalGreen requirements and incorporates voluntary GHG-reducing measures beyond the minimum requirements, the project results in a relatively low level of GHG emissions. Therefore, GHG emissions will have a less than significant impact on the environment.

GCC-2: Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The County of Inyo has not yet developed a specific GHG Reduction Plan that meets the requirements set forth in the latest OPR guidelines. However, the County has adopted goals and policies under the General Plan and Regional Transportation Plan (RTP) to reduce emissions resulting from vehicle trips and land use decisions. As discussed in **Section 4.B.1**, *Air Quality*, of this Draft EIR, the project would incorporate design features to reduce energy consumption (such as an employee shuttle and "cool roof") and would partially rely on on-site renewable energy generation, consistent with General Plan Policy AQ-1.4 (Energy Conservation). The intent of the RTP is to promote land use patterns that reduce the number and length of motor vehicle trips and encourage linkage of new development areas and associated community-wide facilities. As further discussed within **Section 4.L**, *Transportation,* the proposed project is consistent with the latest RTP. The project is also consistent with the climate change-related goals and policies of the County's 2001 General Plan.

As discussed above, the project would be consistent with CalGreen requirements. Because the proposed project would incorporate GHG reduction measures consistent with AB 32 GHG reduction targets, it would support the State's goals to reduce GHG emissions. Thus, the project would not conflict with any applicable plan, policy, or regulation to reduce GHG emissions and would have a less than significant impact.

3. MITIGATION MEASURES

Because impacts are less than significant with inclusion of project features, no additional mitigation measures are required to further reduce GHG emissions.

4. CUMULATIVE IMPACTS

Typically, a cumulative impact results from the effects of a project in addition to the related projects identified in the traffic study**.** However, in the case of global climate change, the proximity of the project to other GHG-generating activities is not directly relevant to the determination of a cumulative impact.

Although AB-32 sets statewide targets for future GHG emissions, the Scoping Plan and other implementing tools of the law are clear that the reductions are not expected to occur uniformly from all sources or sectors. **Table 4.B.2-1,** *GHG Reduction Strategies* contains a list of numerous GHG-reducing strategies potentially applicable to the project, the identified related projects, and future development similar in scope and location (County of Inyo). Included are the regulations or guidelines from which the strategies were developed. The project-level analysis above highlights the manner by which the project intends to meet many of these strategies.

As shown in Table 4.B.2-1, there exist numerous options for related project developers to reduce their contribution to city-, county-, and State-wide GHG emissions, while helping to meet the region's future

Table 4.B.2-1

GHG Reduction Strategies

Source	Description	Demonstration of Project Consistency
AB 1493 (Pavley Regulations)	Reduces greenhouse gas emissions in new passenger vehicles from 2012 through 2016. Also reduces gasoline consumption to a rate of 31 percent of 1990 gasoline consumption (and associated GHG emissions) by 2020	Applies to all new vehicles.
SB 1368	Establishes an emissions performance standard for power plants within the State of California.	LADWP-provided power is subject to performance standards.
Low Carbon Fuel Standard	Establishes protocols for measuring life-cycle carbon intensity of transportation fuels and helps to establish use of alternative fuels.	Applies to fuels utilized by the project.
CALGREEN Requirements	All bathroom exhaust fans shall be Energy Star compliant	Project design is consistent with this requirement.
	Parking spaces shall be designed for carpool or alternative fueled vehicles.	Project design is consistent with this requirement.
	Indoor water usage must be reduced by 20 percent compared to current California Building Code Standards for maximum flow.	Project design is consistent with this requirement.
	Exceed California Energy Code requirements, based on the 2008 Energy Efficiency Standards, by 15 percent	Project design is consistent with this requirement.
	All irrigation controllers must be installed with weather sensing or soil moisture sensors	Project design is consistent with this requirement.
	Wastewater usage shall be reduced by 20 percent compared to current California Building Standards.	Project design is consistent with this requirement.
	Requires a minimum of 50 percent recycle or reuse of nonhazardous construction and demolition debris.	Project design is consistent with this requirement.
	Requires documentation of types of waste recycled, diverted or reused.	Project design is consistent with this requirement.
	100 percent of vegetation, rocks, soils from land clearing shall be recycled or stockpiled on-site.	Project design is consistent with this requirement.
CALGREEN Voluntary Actions	Solar reflective index shall be consistent with CalGREEN or Cool Roof requirements	Project is committed to implementing.
Climate Action Team	Reduce diesel-fueled commercial motor vehicle idling.	Project is committed to implementing.
	Achieve California's 50 percent waste diversion mandate (Integrated Waste Management Act of 1989) to reduce GHG emissions associated with virgin material extraction.	Project design is consistent with this CalGreen requirement.
	Plant five million trees in urban areas by 2020 to effect climate change emission reductions.	Not applicable.

Table 4.B.2-1 (Continued)

GHG Reduction Strategies

Source	Description	Demonstration of Project Consistency
	Implement efficient water management practices and incentives, as saving water saves energy and GHG emissions.	Project design is consistent with this CalGreen requirement.
	The California Energy Commission updates building energy efficiency standards that apply to newly constructed buildings and additions to and alterations to existing buildings. Both the Energy Action Plan and the Integrated Energy Policy Report call for ongoing updating of the standards	CalGreen Code implements this goal, and the Project design is consistent with the requirements.
	Reduce GHG emissions from electricity by reducing energy demand. The California Energy Commission updates appliance energy efficiency standards that apply to electrical devices or equipment sold in California. Recent policies have established specific goals for updating the standards; new standards are currently in development.	CalGreen Code implements this goal, and the project design is consistent with the requirements.
	Apply strategies that integrate transportation and land-use decisions, including but not limited to promoting jobs/housing proximity, high-density residential/ commercial development along transit corridors, and implementing intelligent transportation systems.	The project is located adjacent to an existing major transportation corridor.

PCR Services, CalGreen Building Code, Climate Action Team, Attorney General's Office, 2011

housing, jobs, and infrastructure needs. However, it is not possible at this time to accurately quantify GHG emissions expected from the related projects or the GHG reductions anticipated from the above-listed strategies. Because of the complex physical, chemical and atmospheric mechanisms involved in global climate change, there is no basis for concluding that an emissions increase resulting from the project and the related projects could actually cause a measurable increase in global GHG emissions sufficient to force global climate change. In addition, the emissions models used for project-level evaluations do not fully reflect improvements in technology and other reductions in GHG emissions that are likely to occur pursuant to State regulations, such as AB 1493, SB 1368, AB 32, and Executive Order S-3-5, as well as future federal and/or state regulations. Therefore, it is not possible or meaningful to calculate emissions from each of the identified related projects and compare that with a numeric threshold or reduction target.

Understanding of the fundamental processes responsible for global climate change has improved over the past decade, and predictive capabilities are advancing. As discussed above, however, there remain significant scientific uncertainties, for example, in predictions of local effects of climate change, occurrence of extreme weather events, effects of aerosols, changes in clouds, shifts in the intensity and distribution of

precipitation, and changes in oceanic circulation. Due to the complexity of the Earth's climate system, the uncertainty surrounding climate change may never be completely eliminated. Because of these uncertainties, there continues to be significant debate as to the extent to which increased concentrations of GHGs have caused or will cause climate change, and with respect to the appropriate actions to limit and/or respond to climate change. In addition, it is not possible to label a single development project as the cause of future specific climate change impacts.

The project would be consistent with the State's goals, result in a GHG emission profile that is below the most stringent threshold, and include implementation of the mandatory and many optional GHG-reducing strategies. Therefore, the project does not contribute considerably to cumulatively significant GCC impacts.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Project implementation would result in a less than significant impact regarding GHG emissions and would not substantially contribute to cumulative global climate change impacts.

4.0 ENVIRONMENTAL IMPACT ANALYSIS
C. BIOLOGICAL RESOURCES

INTRODUCTION

This report presents the findings of a general biological resources assessment and jurisdictional delineation conducted by PCR Services Corporation (PCR) for the approximately 28.13-acre Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project ("study area") on Cabin Bar Ranch (CBR) located in the Town of Cartago in southwestern unincorporated Inyo County (County), California. The scope of this assessment encompasses the documentation of existing biological resources in the study area; however, no focused surveys have been conducted at this time. A review of relevant literature initiated the study. The results of the literature review provided information on species and habitat occurrences within the vicinity, laws and regulations pertaining to those resources, and additional background information. The field investigation included the development of a detailed map of the plant communities within the study area and a jurisdictional delineation to determine if any potentially jurisdictional waters and/or wetlands occurred on-site. During these investigations, biologists also assessed the potential for the study area to host sensitive species and/or habitats and regulated resources.

This document also addresses potential project-related impacts associated with the proposed project as well as recommendations regarding measures to alleviate any resulting significant impacts. This documentation is consistent with accepted scientific, technical, and professional standards pursuant to the California Environmental Quality Act (CEQA), U.S. Fish & Wildlife Service (USFWS), California Department of Fish and Game (CDFG), U.S. Army Corps of Engineers (ACOE), and Regional Water Quality Control Board (RWQCB), where appropriate. While general biological resources are discussed in a comprehensive manner, the focus of this assessment is on those resources considered to be sensitive. The submittal of this report is intended to satisfy the biological resource needs of the CEQA process.

1. ENVIRONMENTAL SETTING

a. Regulatory Framework

As part of the proposed project's review and approval, there are a number of performance criteria and standard conditions related to biological resources that must be met. These include compliance with all of the terms, provisions, and requirements of the applicable laws of the various federal, state, and local regulating agencies pertaining to impacts on sensitive plant and wildlife species, wetlands, riparian habitats, and stream courses. The following discusses the applicable regulatory framework.

(1) Federal Clean Water Act, Section 404

Section 404 of the Clean Water Act (CWA) regulates the discharge of dredged material, placement of fill material, or excavation within "waters of the U.S." and authorizes the Secretary of the Army, through the Chief of Engineers, to issue permits for such actions. "Waters of the U.S." are defined by the CWA as "rivers, creeks, streams, and lakes extending to their headwaters and any associated wetlands." Wetlands are defined by the CWA as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil

conditions." The permit review process entails an assessment of potentially adverse impacts to ACOE jurisdictional "waters of the U.S." and wetlands. In response to the permit application, the ACOE will also require conditions amounting to mitigation measures. Where a federally-listed species may be affected, they will also require an Endangered Species Act Section 7 consultation with the USFWS. Through this process, potentially significant adverse impacts within the federal jurisdictional limits could be mitigated to a level that is less than significant.

Over the years, the ACOE has modified its regulations, typically due to evolving policy or judicial decisions, through the issuance of Regulatory Guidance Letters, memorandum, or more expansive instruction guidebooks. These guidance documents help to update and define how jurisdiction is claimed, and how these "waters of the U.S" will be regulated. The most recent significant modification occurred on June 5, 2007, subsequently updated in December 2008 when the ACOE and the U.S. Environmental Protection Agency (EPA) issued a series of guidance documents outlining the requirements and procedures, effective immediately, to establish jurisdiction under Section 404 of the CWA and the Section 10 of the Rivers and Harbors Act 1899 (ACOE and EPA 2006). These documents are intended to be used for all jurisdictional delineations and provide specific guidance for the jurisdictional determination of potentially jurisdictional features affected by the United States Supreme Court rulings in *Rapanos v. the United States* and *Carabell v. the United States* 547U.S. 715 (2006) (jointly referred to as "*Rapanos*").

The *Rapanos* case outlines the conditions and criteria used by the ACOE to assess and claim jurisdiction over non-navigable, ephemeral tributaries. Under a plurality ruling, the Court noted that certain "not relatively permanent" (i.e. ephemeral), non-navigable tributaries must have a "significant nexus" to downstream traditional navigable waters to be jurisdictional. An ephemeral tributary has a significant nexus to downstream navigable "waters" when it has "more than a speculative or an insubstantial effect on the chemical, physical, and/or biological integrity of a TNW." A significant nexus is established through the consideration of a variety of hydrologic, geologic, and ecological factors specific to the particular drainage feature in question. A significant nexus determination is provided by the ACOE to the EPA for the final determination of federal jurisdiction. Drainage features that do not meet the criteria of an RPW based on completion of an ACOE/EPA approved final significant nexus determination and/or are determined to be isolated pursuant to the SWANCC ruling may still be regulated by CDFG under Fish and Game Code Section 1600 or the RWQCB under Porter-Cologne.

(2) Federal Clean Water Act, Section 401

The mission of the California RWQCB is to develop and enforce water quality objectives and implement plans that will best protect the beneficial uses of the State's waters, recognizing local differences in climate, topography, geology, and hydrology. Section 401 of the CWA requires that:

> *Any applicant for a Federal permit for activities that involve a discharge to waters of the State, shall provide the Federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the Federal Clean Water Act.*

Therefore, before the ACOE will issue a Clean Water Act Section 404 permit, applicants must apply for and receive a Section 401 Water Quality Certification from the RWQCB. A complete application for 401

Certification will include a detailed Water Quality Management Plan that addresses the key water quality features of the project to ensure the integrity of water quality in the area during and post-construction.

Under separate authorities granted by state law (e.g., the Porter-Cologne Act), a RWQCB may choose to regulate discharges of dredged or fill material by issuing or waiving (with or without conditions) waste discharge requirements (WDR), a type of state discharge permit, instead of taking a water quality certification action. Processing a WDR is similar to processing Section 401 certification; however, the RWQCB has more discretion to add conditions to a project under the Porter-Cologne Act than it would have under the federal CWA. In addition, the WDR is made public prior to approval to allow for public comment. WDRs must be presented at a board meeting and approved by the board. The Lahontan Regional Water Quality Control Board has jurisdiction over this project.

Section 401 of the CWA requires any applicant for a federal permit for activities that involve a discharge to "waters of the United States" to provide the federal permitting agency certification from the state in which the discharge is proposed stating that the discharge will comply with the applicable provisions of the federal CWA. Therefore, before the ACOE will issue a CWA Section 404 permit, applicants must receive CWA Section 401 Water Quality Certification from the RWQCB to demonstrate such compliance. If a CWA Section 404 permit is not required for the project, the RWQCB may still require a WDR pursuant to the Porter-Cologne Act.

(3) Federal Endangered Species Act, Section 10 and Section 7

Take of a threatened or endangered species is prohibited under federal law without a special permit. Section 10(a)(1)(B) of the federal Endangered Species Act (ESA) allows for take of a threatened or endangered species incidental to development activities once a Habitat Conservation Plan (HCP) has been prepared to the satisfaction of the USFWS and a permit has been issued. For federal projects (including those involving federal funding), Section 7 of the ESA allows for consultation between the affected agency and the USFWS to determine what measures may be necessary to compensate for the incidental take of a listed species. A federal project is any project that is proposed by a federal agency or is at least partially funded or authorized by a federal agency. If the listed species or federally designated critical habitat for that species occurs in a portion of the project area subject to federal jurisdiction or activity (such as waters of the United States), then consultation under Section 7 of the act is usually permissible and may be required.

(4) Migratory Bird Treaty Act of 1918

Unless otherwise permitted by statute, the Federal Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-711) makes it unlawful to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird included in the terms of this Convention...or any part, nest, or egg of any such bird."

(5) California Endangered Species Act

The California Endangered Species Act (CESA) (Section 2050 et seq., California Fish and Game Code) establishes the policy of the State to conserve, protect, restore, and enhance threatened and endangered species and their habitats and to acquire lands for such species. The CESA prohibits the "take" of State-listed

threatened and endangered species without appropriate authorization. The CESA defines the term "take" more narrowly than does FESA, such that some habitat modification actions that might constitute prohibited "take" under FESA might not qualify as prohibited "take" under CESA.

For projects that affect both a State and a federally listed species, compliance with the FESA will satisfy the CESA if the CDFG determines that the federal incidental take authorization is consistent with CESA under Section 2080.1 of the California Fish and Game Code (CFGC). For projects that will result in a take of a State-listed species that is not also federally listed, a take permit must be obtained from the CDFG under Section 2081(b) or other applicable provisions of the CDFG.

(6) State of California Fish and Game Code, Section 1602

Section 1600 et seq. of the FGC (Streambed Alteration) requires any person who proposes a project that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake or use materials from a streambed to notify the CDFG before beginning the project. Similarly, before any state or local governmental agency or public utility begins a construction project that will (1) divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake; (2) use materials from a streambed; or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake, it must first notify the CDFG of the proposed project. The CDFG takes jurisdiction to the top of the bank of a stream or the limit of adjacent riparian vegetation when present.

In the course of the notification process, based on the notification materials submitted to the CDFG and, if necessary, an investigation of the project site by the CDFG, the CDFG will determine if the proposed project may affect fish or wildlife resources. Depending on the extent of the impact, a Streambed Alteration Agreement may be required for the project. The CDFG may place conditions in the Streambed Alteration Agreement to avoid, minimize, or mitigate the potentially significant adverse impacts within CDFG jurisdictional limits.

This citation refers to/is for the subdivision of land, not for any/all development project, so I'm not sure that the citation applies, as quoted.

(7) Owens Lake Habitat Management Plan

The Owens Lake Habitat Management Plan (OLHMP) was developed as a requirement from a mitigation measure under the terms of the 2008 State Implementation Plan Final Subsequent Environmental Impact Report for the Owens Lake Dust Mitigation Project (Mitigation Measure Biology – 14), as cumulative impacts to native wildlife may result from the dust control measures implemented on Owens Lake.[1] The overall goal of the OLHMP is to avoid direct and cumulative impacts to native wildlife communities that may result from implementation of dust control measures on lands owned by LADWP or the California State Lands Commission (CSLC). The OLHMP guides the construction, maintenance, and operational needs of dust control implementation while considering the needs of the resident and migratory wildlife resources utilizing the Owens Lake Dust Control Area (DCA).

[1] *Owens Lake Habitat Management Plan, March 2010; prepared by the Los Angeles Department of Water and Power.*

Prior to implementation of dust control measures, Owens Lake consisted of a large expanse of barren playa, a remnant hypersaline brine pool, and scattered springs and seeps along its shoreline. Water-based dust control measures, such as shallow flooding, inadvertently created habitat opportunities for wildlife where none existed before; however, in most of the DCA, this change was incidental, as the design and purpose of the dust control measures was for their dust control function. Implementation of the dust control measures resulted in increased use of Owens Lake by many wildlife species, as water and vegetation resources became present on much of the former barren playa. Changes to dust control measures, in favor of other more water efficient methods, may be implemented in the future, and the OLHMP seeks to help sustain the ecological values in the DCA, as impacts to wildlife may occur if specific dust control methods are changed from those which are more attractive to wildlife (i.e., shallow flooding and managed vegetation) to less attractive, but approved, alternatives (i.e., gravel).

In order to protect some of the newly-created habitats in the DCA and the wildlife species now using these areas, additional mitigation measures were required, including the management of 1,000 acres in perpetuity for shorebirds and snowy plovers, the creation of 145 acres of habitat shallow flood suitable for shorebird foraging, development of an appropriate deep water habitat plan in perpetuity to support migratory birds, ensuring that 17.5 acres of dust control measures within the CDFG Cartago Springs Wildlife Area are compatible with the designated land use, as well as other measures.[2]

(8) Owens Valley Land Management Plan

The Owens Valley Land Management Plan (OVLMP) provides management direction for resources on all City of Los Angeles-owned lands in Inyo County, excluding the Lower Owens River Project (LORP) area. The OVLMP is a broad resource management plan that will compliment LORP plans for monitoring resources including water supply, habitat, recreation, and land use, from Pleasant Valley Reservoir to Owens Lake. The OVLMP goals, objectives, and management strategies have been shaped by the geographic and geopolitical characteristics of the Owens Valley. The OVLMP provides a framework for implementing management prescriptions through time, monitoring the resources, and adaptively managing changed land and water conditions, while focusing on the most important management tools for the ecosystem – stream flow and land use.[3]

The resource management priorities are derived from the 1997 Memorandum of Understanding (MOU) between LADWP, Inyo County, CDFG, CSLC, the Sierra Club, and the Owens Valley Committee. The MOU provides for the resolution of conflicts over the LORP and other LADWP projects, concerning groundwater pumping operations and related activities in the Owens Valley. The MOU directs that resource management plans, collectively referred to as the OVLMP, be prepared for City of Los Angeles-owned non-urban lands in the Owens River watershed in Inyo County that are not in the LORP planning area, as they are intended to complement the LORP Ecosystem Management Plan.

The goals and objectives for the OVLMP are based on the premise that sustainable land and water use management will protect existing resources and lead to more desirable ecological conditions for both upland and riverine-riparian systems on City of Los Angeles-owned lands in Inyo County.

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[2] *California Department of Fish and Game has determined that shallow-flooding or habitat restoration would be compatible with the Cartago Springs Wildlife Area's designated use.*

[3] *Final Owens Valley Land Management Plan, April 28, 2010; prepared by the Los Angeles Department of Water and Power and Ecosystem Sciences.*

The OVLMP goals are as follows:

1. Continue to supply water to the City of Los Angeles.
2. Implement sustainable land management practices for agriculture (grazing) and other resource uses.
3. Continue to provide recreational opportunities on all City (Los Angeles)-owned land.
4. Improve biodiversity and ecosystem health (condition).
5. Protect and enhance habitat for T&E (threatened and endangered) species.

Water and land use management exert the greatest influence on the Owens River's biotic and abiotic components and, ultimately, the degree of functional state attained by the total ecosystem, as stream flow management and land use are the most important tools for management of the Owens River ecosystem. However, the requirement to meet the water needs of the City of Los Angeles limits LADWP's ability to manipulate flows in the Middle Owens River for riverine-riparian management. Any net increases in wetland/riparian habitat will be a consequence of land management actions that encourage recruitment of new vegetation and plant community diversity.

The following objectives were developed in order to achieve the OVLMP goals as described above and meet MOU expectations:

1. Maintain existing average in-channel flows.
2. Allow for annual out-of-channel or pulse flows to maintain existing riparian/wetland habitats.
3. Initiate ramping rates to minimize rapid water level changes.
4. Implement grazing strategies within riparian and upland pastures.
5. Establish a fire response plan.
6. Modify the location and intensity of recreational activities.
7. Establish guidelines to protect cultural resources.
8. Establish commercial use protocols.
9. Initiate habitat conservation strategies to enhance strategies to enhance and protect T&E species habitat.
10. Monitor and use adaptive management through time.

(9) Desert Renewable Energy Conservation Plan

The Desert Renewable Energy Conservation Plan (DRECP) was developed as a major component of California's renewable energy planning efforts to increase California's renewable energy portfolio standard to 33 percent by 2020 per Senate Bill No. 2X (Joe Simitian, 2011-2012 1st Ex. Sess.), signed into law by

Governor Brown on April 12, 2011. The DRECP is expected to provide long-term endangered species permit assurances while facilitating the review and approval of renewable energy projects in the Mojave and Colorado deserts in California.[4]

b. Existing Conditions

The general biological investigation of the study area was conducted on February 8, 2012. At the time of the site visit, few annual plants were evident, and the majority of the perennial shrubs and trees observed were dormant. A list of representative plant species observed on-site are included in **Appendix C**, *Floral and Faunal Compendium*. Due to the previous agriculture and grazing uses of the land, it can be assumed many annual non-native weedy plant species, especially grasses, would typically comprise a larger percentage of the species found on-site, as is evident from previous surveys conducted on the study area (Montgomery Watson 1996).

(1) Plant Communities

Descriptions of the plant communities mapped within the study area are included below. The locations of each of the plant communities are shown in **Figure 4.C-1**, *Plant Communities*, and acreages are summarized in **Table 4.C-1**, *Plant Communities*, below.

Table 4.C-1

Plant Communities

Plant Community	Acres
Red Willow Thicket	4.20
Rubber Rabbitbrush Scrub	8.98
Mexican Rush Marsh	5.55
Salt Grass Flat	3.08
Disturbed/Freemont Cottonwood Stand	0.66
Ruderal	2.98
Developed	2.68
TOTAL	**28.13**

Source: PCR Services Corporation, 2012.

Red Willow Thicket

Red willow thicket (*Salix laevigata* Woodland Alliance) (61-205-00),[5] a riparian natural community, occupies 4.20 acres within the southern half of the study area and along Cartago Creek which enters the study area

[4] *California Energy Commission. 2012. Website accessed June 6, 2012. Desert Renewable Energy Conservation Plan. http://www.drecp.org/*

[5] *California Natural Community Cade (CaCode) from the Department of Fish and Game Vegetation Classification and Mapping Program*

from the west. Red willow thicket is found in the arid western United States along ditches, floodplains, lake edges, and low gradient depositions along streams, with stands regularly occurring along foothill streams and low gradient riparian settings.

The red willow thicket observed on-site is dominated by red willow. Other representative species found within this community include Fremont cottonwood (*Populus fremontii* ssp. *fremontii*), velvet ash (*Fraxinus velutina*), rubber rabbitbrush (*Ericameria nauseosa*), four-wing saltbush (*Atriplex canescens*), and salt grass (*Distichlis spicata*). Non-native Russian thistle (*Salsola* sp.) was common within this community, as well as a variety of common ornamental trees and shrubs, including several ornamental sycamores (*Platanus* sp.) which were located on the western side of the study area.

Rubber Rabbitbrush Scrub

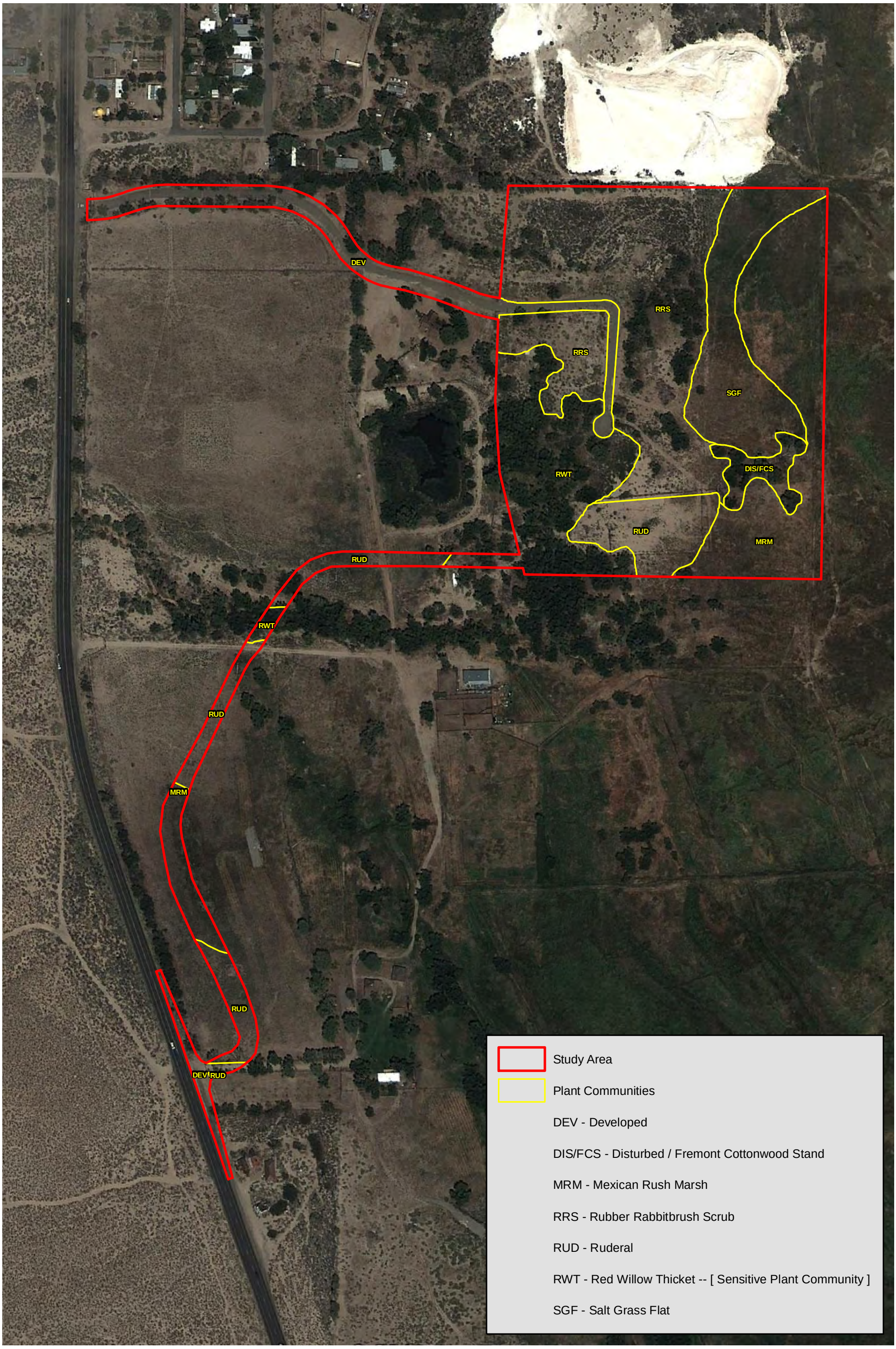
Rubber rabbitbrush scrub (*Ericameria nauseosa* Shrubland Alliance) (35.310.00) occupies approximately 8.98 acres within the study area and was found in the northwestern portion of the study area on both sides of the paved road ending in a cul-de-sac. The community is found most frequently in disturbed settings where soils are comprised of well-drained sands and gravels. The disturbances are often characterized by activities such as grazing and clearing for roads, both of which have occurred within the study area. This community is dominated by rubber rabbitbrush in association with a variety of shrubs species, such as Mojave buckwheat (*Eriogonum mohavensis*), and burro weed (*Artemisia dumosa*), and, on the western edge of the community, widely spaced emergent red willow trees. Other native plants species found within this community include blue wild rye (*Elymus glaucus*), narrow-leaf milkweed (*Asclepias fascicularis*), cocklebur (*Xanthium strumarium*), and wild rose (*Rosa woodsii* var. *ultramontana*). Non-native plant species observed included curly dock (*Rumex* sp.), Russian thistle, and beard grass (*Polypogon monspeliensis*).

Mexican Rush Marsh

The study area is comprised of 5.55 acres of Mexican rush marsh [*Juncus arcticus* (var. *mexicanus*) [6] (45.562.00) Herbaceous Alliance]. This community is found in areas that are wet most of the year, such as meadows, along stream banks, and near lakes, ponds, or fens, with soils that are poorly drained and often have a thick organic layer. This environment favors low, herbaceous, hydrophytic (i.e., water-loving) plants and is widespread in the western United States in seasonally flooded sites from the coast to the high montane. This community encompassed the low lying areas on the eastern side of the study area, and extends off-site toward the former lake shore.

Mexican rush is the dominant plant species found in rush marsh in all the locations in the study area. On the eastern side of the study area within the larger portions of the marsh community, a variety of native plants typically found in wetter conditions occur, including small-flowered bulrush (*Scirpus microcarpus*), yerba

[6] *It should be noted, for purposes of this report, Mexican rush is identified as Juncus arcticus (var. mexicanus). However, the accepted scientific name and identification of this species is the source of some debate. The circumboreal Juncus arcticus-balticus complex has been treated in many ways with botanists differing in opinion over whether this is one species with many varieties or whether there are many different species. The current standard for description of natural communities as prescribed by the CDFG, the* Manual of California Vegetation, Second Edition*, published in 2009, follows the* Flora of North America *(Brooks and Clements 2000) which names the plant found on-site a variety of Juncus balticus var. mexicanus. However, this report describes individual plant species based on The Jepson Manual, Vascular Plants of California, published in 2012, which describes the same plant as a distinct species, Juncus mexicanus and notes the equivalency of the two.*



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Plant Communities

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: Google Earth, 2011; PCR Services Corporation, 2012.

FIGURE

4.C-1

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mansa (*Anemopsis californica*), alkali pink (*Nitrophila occidentalis*), salt grass, and blue wild rye. Several non-native wetland species were found, including five-hook bassia (*Bassia hyssopifolia*), beard grass (*Polypogon monspeliensis*), and invasive red-stem filaree (*Erodium cicutarium*).

Salt Grass Flat

Approximately 3.08 acres of salt grass flats (*Distichlis spicata* Herbaceous Alliance) (41-200.00) occur within the study area. This natural community is found in many alkaline or saline environments in California and occurs in coastal, desert, and montane areas. Soils are often deep, alkaline, or saline and often have an impermeable layer causing them to be poorly drained. When the soil is dry, the surface usually has salt accumulations.

The salt grass flat community found within the study area is a transitional community bordering the wet rush marsh on the east and the dry rubber rabbitbrush scrub on the west. In salt grass flats, salt grass is dominant or co-dominant with other species of salt-tolerant herbaceous plant species, depending on the location. Two common examples found within the study area are yerba mansa and Mexican rush. Additionally, this natural community sometimes has emergent shrubs, and in the study area, salt grass flats were seen in areas close to the rubber rabbitbrush scrub where the two communities met and intergraded with one another. Other plants found in this community on-site include squirreltail (*Elymus elymoides*), salty bird's beak (*Chloropyron maritimum* ssp. *canescens*), desert alyssum (*Lepidium fremontii*), and cocklebur.

Disturbed/Fremont Cottonwood Stand

A few sparse, isolated cottonwoods are found in a 0.66 acre area near the eastern boundary of the study area. The area is slightly more elevated than the marsh to the east and north, and the soil is dry enough to support the cottonwood trees. Except for the presence of the cottonwood trees, the description of the plant community would approach that of disturbed, ruderal areas. There is no shrub component and the mix of species is most similar to those found in the adjacent former pasture, such as red brome grass and salt grass. In a Fremont cottonwood forest (*Populus fremontii* Forest Alliance) natural community, over half the relative tree cover is Fremont cottonwood and one or several other native woody or shrub types are also co-dominant. The lack of any other tree or shrub species as defined in the Manual of California Vegetation as co-dominating members of the Fremont cottonwood forest confirms this area does not match the characteristics of that natural community.

Ruderal

Ruderal areas are dominated by weedy plant species which are characteristically the first to colonize disturbed lands. The soil is generally compacted and the sparse vegetation consists of herbaceous annual grasses and forbs with occasional shrubs of the types found in the surrounding areas. Ruderal areas were found in the western portion of the study area along US 395 within an area formerly used as a pasture for grazing, and in the southern-central portion of the study area which was formerly a corral for livestock. In total, the two ruderal areas comprise approximately 2.98 acres. Due to the time of year that the general biological survey was conducted, many of the plants were dried up and not identifiable, but were well represented by introduced non-native, common weeds such as red-stem filaree (*Erodium cicutarium*) and Russian thistle.

Developed

Developed areas are comprised primarily of paved roads, with an adjacent roadside ditch, and some surrounding vegetation along the fringes of the paved road, which were dominated by ornamental trees and ruderal (i.e., weedy) species interspersed with a mix of native and non-native plant species. This community occupies approximately 2.68 acres along US 395 in the southwestern corner of the study area, along the existing paved northern access road, and where that access road enters the study area and ends in a cul-de-sac. Black poplar (*Populus nigra*) and other ornamental trees have been planted along the roadsides, while the understory is mixed with non-native plants and some native plants from the surrounding areas. Plants found closer to the highway included great sagebrush (*Artemisia tridentata*), allscale (*Atriplex polycarpa*), and four-wing saltbush, which are commonly found in the vicinity along roads. Within the study area, the vegetation more commonly reflected that of the surrounding rubber rabbitbrush scrub as well as introduced non-native species, such as red brome (*Bromus rubens*) and Russian thistle.

(2) Sensitive Natural Communities

The CDFG ranks distinct alliances of plant species in natural communities according to their degree of imperilment (as measured by rarity, trends, and threats) and follows the NatureServe's Heritage Methodology in which all alliances are listed with G (global) and S (state) rank. Alliances with State ranks of S1-S3 are considered to be imperiled with S1 being the most at risk and S3 the least (NatureServe 2009). A further distinction within these categories determines the quality of the particular occurrence and is based on flexible criteria, such as the presence or absence of invasive exotic species, evidence of human based disturbance such as roads or excessive livestock grazing, evidence seedlings and sprouts, and evidence of insect or disease damage.

The study area supports one sensitive plant community: red willow thicket (G3S3, CaCode 61.205.01). A total of 4.14 acres of red willow thicket occurs on-site.

(3) Sensitive Plant Species

A review of the California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS) *Inventory of Rare and Endangered Plants*[7] was conducted for observations of species considered sensitive with a California Rare Plant Rank (CRPR, formerly referred to as CNPS List) of 2 or less in the vicinity of the study area. The search area included the U.S. Geographical Survey (USGS) topographic quadrangles Olancha, Bartlett, Cirque Peak, Haiwee Pass, Haiwee Reservoirs, Monache Peak, Owens Lake, Templeton Mountain, and Vermillion Canyon. A total of 30 sensitive plant species have occurrences documented within the vicinity and include: Ramshaw Meadows abronia (*Abronia alpina*) [Federal Candidate (FC), CRPR 1B.1], Kern Plateau milk-vetch (*Astragalus lentiginosus* var. *kernensis*) (CRPR 1B.2), Tulare rockcress (*Boechera tularensis*) (CRPR 1B.3), upswept moonwort (*Botrychium ascendens*) (CRPR 2.3), scalloped moonwort

[7] *CNPS identifies five categories of rarity for plants with California Rare Plant Ranks (CRPR, formerly CNPS List species): List 1A - Presumed extinct in California; List 1B - Plants Rare, Threatened, or Endangered in California and elsewhere; List 2 - Plants Rare, Threatened, or Endangered in California, but more common elsewhere; List 3 - Plants about which we need more information – a review list; and List 4 - Plants of limited distribution – a watch list. The CNPS recently added "threat ranks" which parallel the ranks used by the CNDDB. These ranks are added as a decimal code after the CRPR List (e.g., List 1B.1). The threat codes are as follows: .1 – Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat); .2 – Fairly endangered in California (20-80% occurrences threatened); and .3 – Not very endangered in California (<20% of occurrences threatened or no current threats known).*

(*Botrychium crenulatum*) (CRPR 2.2), common moonwort (*Botrychium lunaria*) (CRPR 2.3), mingan moonwort (*Botrychium manganese*) (CRPR 2.2), pygmy pussypaws (*Calyptridium pygmaneum*) (CRPR 1B.2), Kern Plateau bird's beak (*Cordylanthus eremicus* var. *kernensis*) (CRPR 1B.3), rosette cushion cryptantha (*Cryptantha circumscissa* var. *rosulta*) (CRPR 1B.2), sanicle cymopterus (*Cymopterus ripleyi* var. *saniculoides*) (CRPR 1B.2), Kern River fleabane (*Erigeron multiceps*) (CRPR 1B.2), Olancha Peak buckwheat (*Eriogonum wrightii* var. *olanchense*) (CRPR 1B.3), Sharsmith's stickweed (*Hackelia sharsmithii*) (CRPR 2.3), Kern Plateau horkelia (*Horkelia tularensis*) (CRPR 1B.3), field ivesia (*Ivesia campestris*) (CRPR 1B.2), Father Crowley's lupine (*Lupinus padre-crowleyi*) (CRPR 1B.2), creamy blazing star (*Mentzelia tridentata*) (CRPR 1B.3), bog sandwort (*Minuartia stricta*) (CRPR 2.3), sweet-smelling monardella (*Monardella beneolens*) (CRPR 1B.3), Charlotte's phacelia (*Phacelia nashiana*) (CRPR 1B.2), Parish's popcorn-flower (*Plagiobothrys parishii*) (CRPR 1B.1), Letterman's blue grass (*Poa lettermanii*) (CRPR 2.3), tundra thread-moss (*Pohlia tundrae*) (CRPR 2.3), Bailey's greasewood (*Sarcobatus baileyi*) (CRPR 2.3), Owen's Valley checkerbloom (*Sidalcea covillei*) [State Endangered (SE), CRPR 1B.1], cut-leaf checkerbloom (*Sidalcea multifida*) (CRPR 2.3), Dedecker's clover (*Trifolium dedeckerae*) (CRPR 1B.3), marsh arrow-grass (*Triglochin palustris*) (CRPR 2.3), and grey-leaved violet (*Viola pinetorum* ssp. *grisea*) (CRPR 1B.3).

The following sensitive species are not expected to occur due to lack of suitable habitat, or because the study area is outside of the known elevation or distribution range for the species: Ramshaw Meadows abronia, Kern Plateau milk-vetch, common moonwort, pygmy pussypaws, rosette cushion cryptantha, Olancha Peak buckwheat, Sharsmith's stickweed, Kern Plateau horkelia, Father Crowley's lupine, bog sandwort, sweet-smelling monardella, Letterman's blue grass, tundra thread-moss, and Dedecker's clover.

All plant species observed within the study were recorded and compiled and are included in **Appendix C**, *Floral and Faunal Compendium*. No sensitive plants listed above were observed during the field survey, but based on the environmental conditions in which some have been known to occur and the habitat seen in the study area, there is potential for these species to occur on-site. Focused surveys are recommended for the following species due to the presence of potentially suitable habitat: Tulare rockcress, upswept moonwort, scalloped moonwort, mingan moonwort, Kern Plateau bird's beak, sanicle cymopterus, Kern River fleabane, field ivesia, creamy blazing star, Charlotte's phacelia, Parish's popcorn-flower, Bailey's greasewood, Owen's Valley checkerbloom, cut-leaf checkerbloom, marsh arrow-grass, and grey-leaved violet. Surveys should be conducted for these plants during the appropriate seasons making sure to encompass the flowering periods of all potentially present sensitive plants. Based on known blooming periods, it is recommended that three sensitive plant surveys be conducted to maximize the chance to observe each species during its blooming period during April, May/June, and August. The location of any observed sensitive plant species will be recorded and mapped, if detected.

The Owen's Valley checkerbloom, a State Endangered species, is found only in the Owen's Valley. Cartago is at the southernmost edge of its distribution range and there are records of it occurring in only three locations near the town. CNDDB records show that in 1988 approximately 1,500 – 2,000 plants were found on the Cabin Bar Ranch property in one of the former pasture areas, which is approximately 1,300 feet to the south of the study area. In 1999, another population was recorded approximately one mile to the south-southeast and again, in 2002, another population was reported one mile to the north-northeast. According to Sally Manning, president of the local Bristlecone Chapter of the CNPS, currently this species is not known to occur in any other locations in the vicinity (pers. comm. Manning 2012). At Cabin Bar there have been no subsequent significant alterations to the pastures since 1988 and it should be presumed the plant is still there. Focused surveys for this species are recommended.

Parish's popcorn-flower is a CRPR List 1B.1 species. CNDDB records show an occurrence of this species documented 0.6 mile to the north of the study area. Focused surveys for this species area recommended.

(4) Sensitive Wildlife Species

A review of CNDDB documented sensitive wildlife species in the vicinity was conducted for occurrences of sensitive wildlife species which are federally or state listed as threatened, endangered or candidate or are State Species of Special Concern. A total of 23 species were identified in the review, including Yosemite toad (*Anaxyrus canoris*) [FC, State Special Concern (SSC)], pallid bat (*Antrozous pallidus*) (SSC), Swainson's hawk (*Buteo swainsoni*) [State Threatened (ST)], western snowy plover (*Charadrius alexandrinus nivosus*) [Federal Threatened (FT), SSC],[8] Owen's pupfish [Federal Endangered (FE), SE], spotted bat (*Euderma maculatum*) (SSC), desert tortoise (*Gopherus agassizii*) (FT, ST), California wolverine (*Gulo gulo*) (FC, ST), yellow-breasted chat (*Icteria virens*) (SSC), least bittern (*Ixobrychus exilis*) (SSC), loggerhead shrike (*Lanius ludovicianus*) (SSC), Pacific fisher [*Martes pennant* (*pacifica*) Distinct Population Segment (DPS)] (FC, SSC), Owen's Valley vole (*Microtus californicus vallicola*) (SSC), Volcano Creek golden trout (*Oncorhynchus mykiss aguabonita*) (SSC), Sierra Nevada bighorn sheep (*Ovis canadensis sierra*) (FE, SE), Wong's springsnail (*Pyrgulopsis wongi*), Sierra Madre yellow legged-frog (*Rana muscosa*) (FE, SSC), Owen's tui chub (*Siphateles bicolor snyderi*) (FE, SE), American badger (*Taxidea taxus*) (SSC), Le Conte's thrasher (*Toxostoma lecontei*) (SSC), least Bell's vireo (*Vireo belli pusillus*) (FE, SE), Sierra Nevada red fox (*Vulpes vulpes necator*) (ST), and Mohave ground squirrel (*Xerospermophilus mohavensis*) (ST).

No sensitive wildlife species were observed during the field survey. All wildlife species observed within the study were recorded and compiled and are included in **Appendix C**, *Floral and Faunal Compendium*. The following sensitive species are not expected to occur due to lack of suitable habitat, foraging habitat, or because the project area is outside of the known elevation or distribution range for the species: Yosemite toad, pallid bat, western snowy plover, California wolverine, Pacific fisher, Volcano Creek golden trout, Sierra Nevada bighorn sheep, Sierra Madre yellow legged-frog, American badger, Le Conte's thrasher, and Sierra Nevada red fox.

The study area is located outside the northern edge of the geographic range of the desert tortoise (USFWS 2011) and is not located within a Desert Wildlife Management Area. The nearest USFWS designated critical habitat for the desert tortoise is 66 miles to the south-southeast. Besides one occurrence reported to the CNDDB in 2006 of a single male approximately 2.4 miles to the north of the study area, the closest occurrences are over 13 miles to the south and in the same year. Based on correspondence with CDFG, it is believed the single male recorded north of the study area is an outlier and was most likely a released animal (pers. comm. Elsworth 2012). Although the rubber rabbitbrush scrub located in the northern section of the study area is potentially suitable habitat for the species, its limited area of 8.98 acres is inadequate to support a single desert tortoise individual. A female desert tortoise requires a home range of approximately 100 acres while a male requires twice as much area (USFWS 2010). Thus, for these reasons, the presence of desert tortoise is not expected and surveys are not recommended.

Sensitive wildlife species with potential to occur due to suitable habitat on-site include Wong's springsnail, Owen's tui chub, Owen's pupfish, Swainson's hawk, loggerhead shrike, yellow breasted chat, least bittern,

[8] *Although occurrences of western snowy plover have been documented to occur around Owens Lake Playa, the study area does not support suitable habitat for this species.*

least Bell's vireo, spotted bat, Owen's Valley vole, and Mohave ground squirrel. These species are described in further detail below.

Although Wong's springsnail is neither a California Species of Special Concern, nor is a Federal- or State-listed species, this species is described as being restricted in distribution, but locally abundant (Furnish, J. 2007. *Guide to Sensitive Aquatic Mollusks of the U.S. Forest Service Pacific Southwest Region.* USDA Forest Service, Pacific Southwest Region. PCWA-L-568) and has been documented to occur 0.5 miles south of the study area in the CNDDB. This species is found in the Owen's Valley. Habitat includes seeps and small spring-fed streams, and this species is commonly found in watercress and/or on small bits of travertine and stone. It only occurs in flowing water. Due to the close proximity of the occurrence documented in CNDDB, which was observed on another portion of Cabin Bar Ranch, this species has potential to occur on-site in Cartago Creek.

The Owen's tui chub is a Federal Endangered and State Endangered species. The CNDDB lists one occurrence of the Owen's tui chub on-site and several in the vicinity to the east of the study area within the Owen's Lake Playa. Although there does not appear to be suitable habitat for the Owen's tui chub on-site (i.e., lack of the presence of water since the drainage features on-site were dry at the time of the site visit), due to the multiple occurrences in the vicinity and the presence of the ephemeral Cartago Creek, dried ponds, and irrigation ditches within the study area, a habitat assessment and, if warranted, focused surveys by a local specialist are recommended in order to determine presence or absence. Because the study area supports potentially suitable habitat for the species, this species has potential to occur on-site.

The Owen's pupfish is a Federal Endangered and State Endangered species. The CNDDB lists one occurrence of the Owen's pupfish on-site (though the occurrence covers the entire quadrangle in which this species was mapped). Although there does not appear to be suitable habitat for the Owen's pupfish on-site (i.e., lack of the presence of water since the drainage features on-site were dry at the time of the site visit), due to the occurrence and the presence of the ephemeral Cartago Creek, dried ponds, and irrigation ditches within the study area, a habitat assessment and, if warranted, focused surveys by a local specialist are recommended in order to determine presence or absence. Because the study area supports potentially suitable habitat for the species, this species has potential to occur on-site.

The Swainson's hawk is a State Threatened species. The CNDDB lists one occurrence of the Swainson's hawk approximately 5 miles south-southeast of the study area. Although there are no recorded occurrences of the Swainson's hawk on-site, the study area supports potentially suitable habitat for the species; thus focused surveys during the appropriate season shall be conducted to determine presence or absence of the Swainson's hawk and any nesting sites are recommended.

The loggerhead shrike is a California Species of Special Concern. The CNDDB lists one occurrence of the loggerhead shrike in the vicinity, 5 miles south of the study area. Although there are no recorded occurrences of the loggerhead shrike on-site, the study area supports potentially suitable habitat for the species; thus this species has potential to occur on-site.

The yellow breasted chat is a California Species of Special Concern. The CNDDB lists a yellow breasted chat occurrence in the vicinity to the south of the study area. Although there are no recorded occurrences of the yellow breasted chat on-site, this species was recorded 1 mile south of the study area, and the study area

supports potentially suitable habitat for the species, red willow thicket; thus, this species has potential to occur on-site.

The least bittern is a California Species of Special Concern. Although there are no recorded occurrences of the least bittern on-site, the study area supports potentially suitable habitat for the species; thus, this species has potential to occur on-site.

The least Bell's vireo is a Federal Endangered and State Endangered species. The CNDDB lists a least Bell's vireo occurrence in the vicinity to the south of the study area. Although there are no recorded occurrences of the least Bell's vireo on-site, this species was recorded 1 mile south of the study area, and the study area supports potentially suitable habitat for the species, red willow thicket; thus, focused protocol surveys during the appropriate season (April 10 – July 31) are recommended to determine presence or absence of the least Bell's vireo.

The spotted bat is a California Species of Special Concern. The CNDDB lists a spotted bat occurrence immediately adjacent to the northeast boundary of the study area. Although there are no recorded occurrences of the spotted bat on-site, the study area supports potentially suitable foraging habitat for the species; thus this species has potential to occur on-site.

The Owen's Valley vole is a California Species of Special Concern. Records in CNDDB and in the previous DEIR prepared for a larger site which included the current study area (Montgomery Watson 1993) indicate that the Owen's Valley vole was found in the study area in 1989, "along fencelines, in unflooded swales and beneath taller vegetation and along canal banks." Although the finding is not recent, these structural features are still present on-site and this species has potential to occur on-site. The vole inhabits the edges of marshes in transitional zones where lush vegetation for forage and is in close proximity with slightly elevated and drier areas where burrows are not flooded. Such habitat is found in many places in the Owen's Valley and surrounds the former lakeshore of the Owen's Lake. The eastern portion of study area is characterized by this habitat type. Although there are few records in the CNDDB of the vole being found in the vicinity, recent studies indicate this species is not uncommon on the margins of marsh habitats in the Owen's Valley. In the summer of 2011, the CDFG conducted studies of the vole, including trapping, in several locations in the Owen's Valley. According the CDFG, it was reported that trapping studies in the Cartago and Olancha area found the vole in many of the survey sites investigated (pers. comm. Hawk 2012).

The Mohave ground squirrel is a State Threatened species. The CNDDB lists several occurrences of the Mohave ground squirrel in the vicinity with the nearest occurrence 2.6 miles to the east of the study area. Although there are no recorded occurrences of the Mohave ground squirrel on-site, the study area supports potentially suitable habitat for the species, open desert scrub and alkali scrub; thus, focused protocol surveys during the appropriate season are recommended to determine presence or absence of the Mohave ground squirrel.

(5) Wildlife Movement

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, or individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (e.g., foraging for food or water; defending territories; searching for mates, breeding areas, or cover). Although the nature of each of these types of movement is species

specific, large open spaces will generally support a diverse wildlife community representing all types of movement. Each type of movement may also be represented at a variety of scales from non-migratory movement of amphibians, reptiles, and some birds on a "local" level to home ranges encompassing many square-miles for large mammals moving on a "regional" level.

From a regional perspective, the study area is located within the Owens Valley, just west of the Owens Lake Playa, which is along the course of the Pacific Flyway, a major migratory wildlife corridor. Although Owens Lake Playa no longer provides the water resources that it historically did, the lake still contains some water and is a resource to both local wildlife and species moving through the region. In addition, the study area is situated south of the CDFG Cartago Wildlife Area, which provides habitat for water fowl, wading birds, and shorebirds (**Figure 4.C-2**, *Regional Aerial Photograph*). No corridors described in the *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California* (Spencer, W.D., et al. 2010) occur within the study area.

The study area is located along the southwestern margin of the Owens Lake Playa near the existing Crystal Geyser Roxane plant, the rural town of Cartago, and US 395. In comparison with the many square miles of surrounding undeveloped open space, the habitat that the study area supports is degraded due to previous grazing and livestock ranching activities, which has resulted in the introduction of many non-native species and compaction of the soil, and thus does not provide high quality habitat for wildlife. In addition, the developed structures and human activity within the vicinity, as well as the traffic associated with US 395, would likely deter wildlife that are not adapted to some level of anthropogenic disturbances from utilizing the area, especially in comparison to other less disturbed open space areas in the vicinity. However, the native willow, cottonwood, and ash trees within the study area, as well as non-native sycamore and poplar tree stands which were planted on-site, provide tree cover which is limited in the Owens Lake Playa area.

(6) Jurisdictional Features

The 28.13-acre study area supports wetlands that occur along the southwestern edge of the larger approximately 74,000-acre Owens Lake Playa, and an intermittent tributary drainage identified as Cartago Creek that conveys flow toward the on-site wetland area. Based on the jurisdictional delineation conducted by PCR on February 8, 2012, the study area supports a total of approximately 6.03 acres of ACOE/RWQCB jurisdictional "waters of the U.S." and 6.16 acres of CDFG jurisdictional streambed and associated riparian habitat, of which approximately 5.97 acres are wetlands (**Figure 4.C-3**, *Jurisdictional Features*). No wetlands within the study area were observed in relation to Cartago Creek. The wetlands within the study area are located along the fringe of the larger Owens Lake Playa along its southwestern extent. The wetlands along this playa are supported by groundwater hydrology fed by local runoff and snow melt as further detailed in the description of the Owens Lake Playa Wetlands below. Prior to conducting the jurisdictional delineation, PCR reviewed previous documentation, data, and maps associated with the study area including, but not limited to, the USGS 7.5-minute Olancha Quadrangle, historic satellite imagery, a biological resource assessment of the Cabin Bar Ranch (Montgomery Watson 1996), and the *Delineation of Waters of the United States for the Owens Lake Playa* prepared on behalf of the ACOE (Jones & Stokes Associates 1996). The jurisdictional delineation was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) with consideration given to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual Arid West Region* (2008a). The ACOE's *Field Guide to the Identification of the OHWM in the Arid West Region of the United States* (2008b) was followed given the ephemeral nature of the Cartago streambed observed upstream of, and within, the study area. In addition,

the *Final Summary Report: Guidelines for Jurisdictional Determinations for Waters of the United States in the Arid Southwest* (2001) was consulted given this document's direct application to the determination of ACOE jurisdiction for drainage features associated with alluvial fans in dryland watersheds.

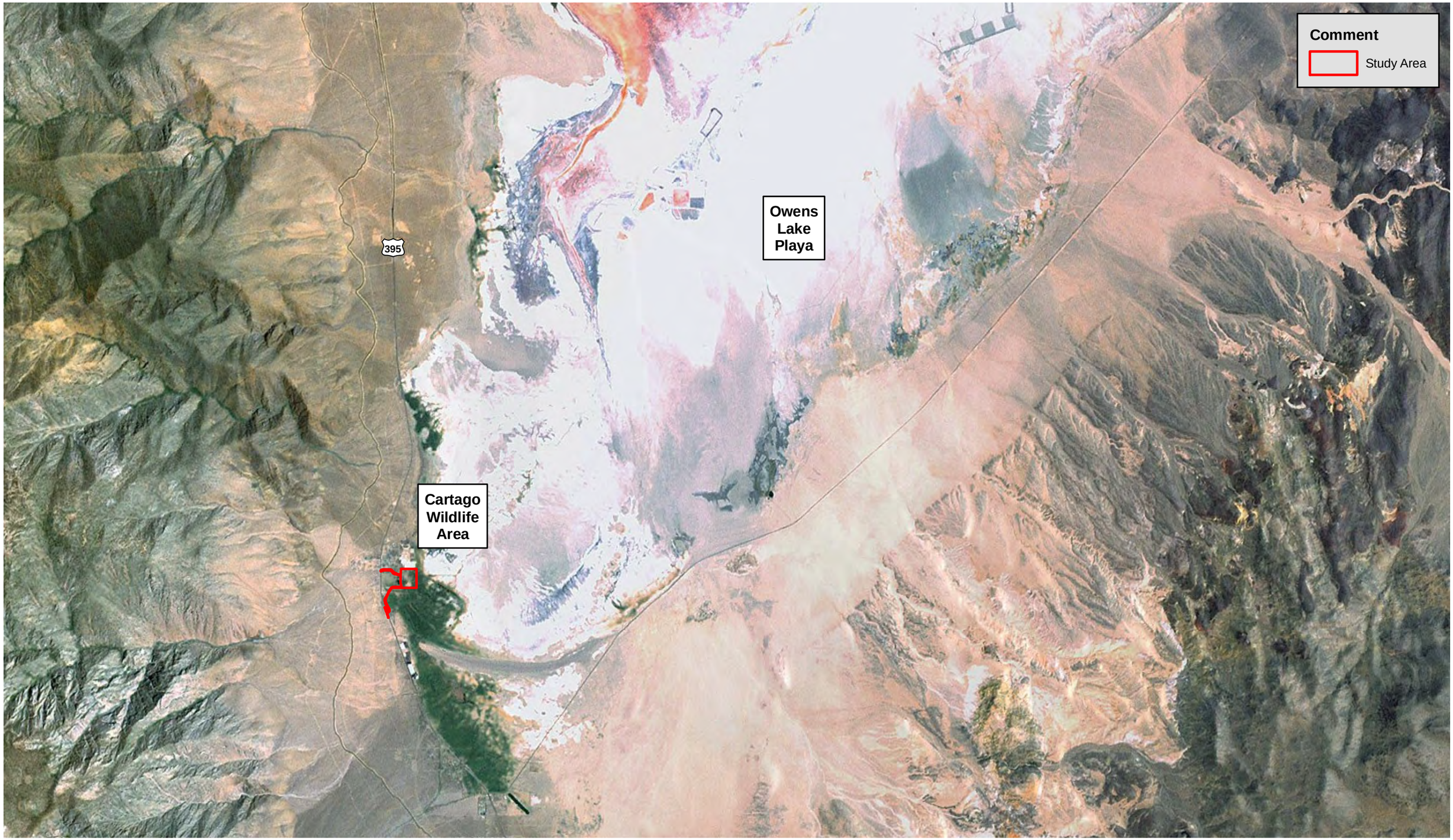
The following provides a description and tabular summary of jurisdictional features mapped within the study area. **Figure 4.C-4**, *Jurisdictional Features Photographs,* provides photographs of the jurisdictional features. Wetland data sheets are also provided in **Appendix C**, *Wetland Data Sheets*.

Cartago Creek and Man-Made Ditch

Cartago Creek is identified on the USGS Olancha Quadrangle as an intermittent blueline stream associated with a topographically steep and sparsely vegetated watershed nestled within the Sierra Nevada Mountains/Inyo National Forest directly south/southwest of the study area, west of US 395. Cartago Creek bifurcates into two distinct channels off-site, one trending northeast and the other trending southeast from the base of the foothills, where the drainage flows onto an alluvial fan. Based on review of recent satellite imagery and USGS topographical map review, it appears that the majority of surface flow from the Cartago Creek watershed drains to the southeast trending tributary which crosses US 395 approximately 1.5 miles south of the study area. The Cartago Creek watershed primarily conveys runoff and snow melt for a portion of the year and is otherwise ephemeral in nature. Field review of the northeast trending Cartago Creek channel approximately 0.5 mile upstream of the study area confirmed the presence of an ephemeral streambed sparsely vegetated with upland habitat and an occasional cottonwood tree consistent with satellite imagery observations. The creek conveys flow beneath US 395 through a pipe culvert. Cartago Creek then extends for approximately 650 linear feet east of the US 395 prior to briefly crossing the study area for approximately 45 linear feet through an access road proposed southwest of the main facility.

The ACOE/RWQCB jurisdictional channel width for the Cartago Creek was estimated to be 12 feet, while the extent of CDFG jurisdiction totals approximately 80 feet based on the width of streambed associated riparian habitat. Vegetation associated with the portion of Cartago Creek within the study area is dominated by a red willow thicket community that includes red willow, velvet ash, and sandbar willow (*Salix exigua*). Beneath the riparian canopy the streambed supports stands of red willow and sandbar willow within the shrub layer in addition to patches of upland vegetation such as burrobush (*Ambrosia dumosa*) and Russian thistle. Soils associated with Cartago Creek within the study area are of the Cajon Loamy Sand series[9] as confirmed in the field. Upon exiting the study area, Cartago Creek meanders in an easterly direction and conveys minor surface flows into a feature that appears to be a man-made ditch, north of the creek. The ditch is approximately 2 feet in width and supports indicators of ordinary flow such as gravel sorting and destruction of vegetation. It extends north across the property for approximately 1,056 linear feet. The ditch appears to have served as a means to divert minor surface flows from Cartago Creek across the property away from an area that may have historically supported pastures directly east of the ditch which PCR determined to be dominated by wetland habitat (as summarized in the discussion of the Owens Lake Playa wetlands below). The final approximately 565 linear feet of the man-made ditch does not support jurisdictional field indicators as flows have naturally eroded a northeast trending channel that diverts flows from the ditch into the Owens Lake Playa wetlands near the northeast limits of the study area as depicted on Figure 4.C-3, *Jurisdictional Features*.

[9] *As mapped by the Soil Survey Staff at the Natural Resource Conservation Service (NRCS) using the Soilweb data in Google Earth.*

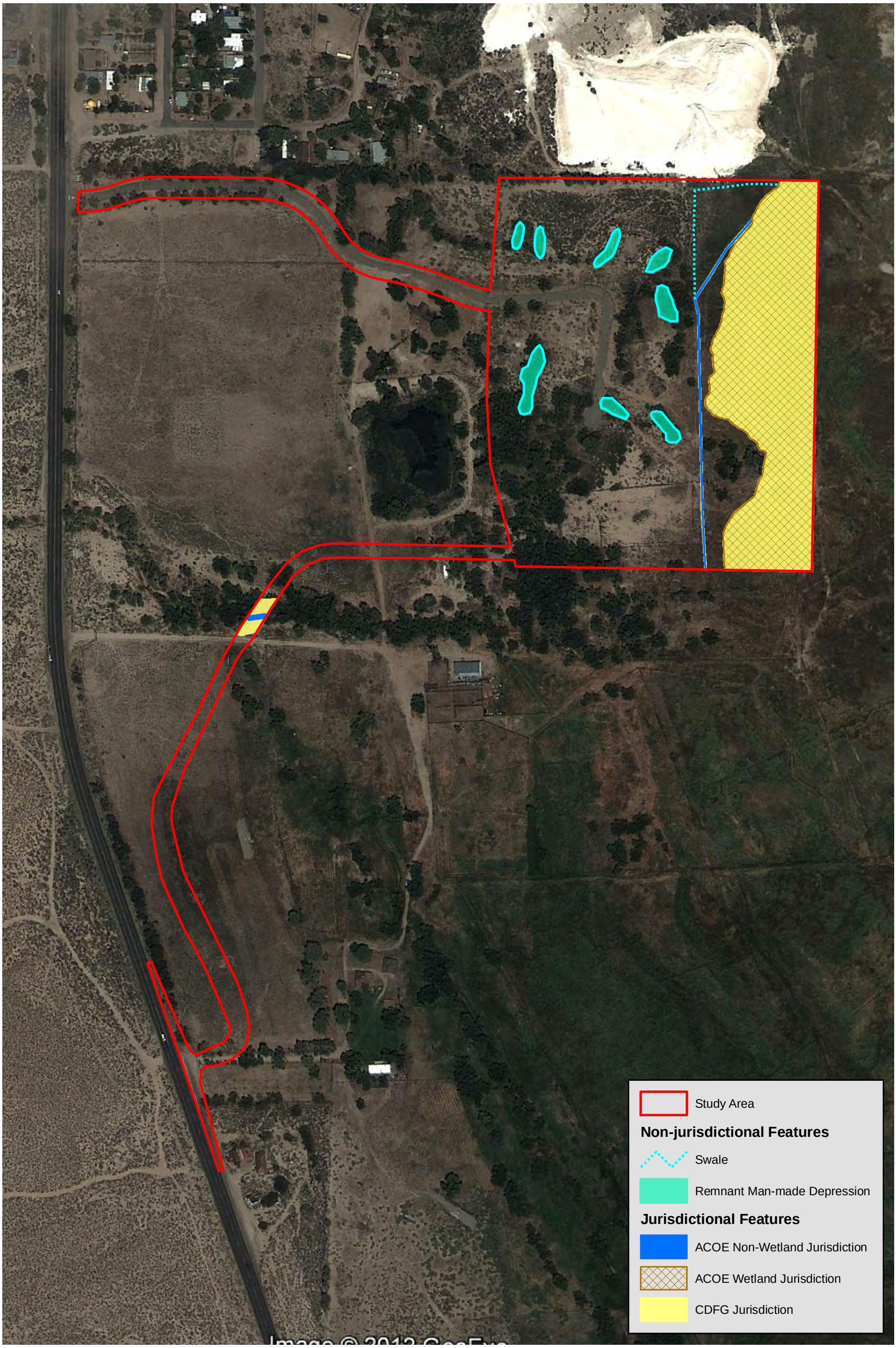


P C R

Regional Aerial Photograph

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project
Source: NAIP, 2005; PCR Services Corporation, 2012.

FIGURE
4.C-2



PCR

N

0 250 500 Feet

Jurisdictional Features

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: Google Earth, 2011; PCR Services Corporation, 2012.

FIGURE

4.C-3

Photograph 1

Photograph 2

Photograph 3

PCR

Jurisdictional Features Site Photographs

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: PCR Services Corporation, 2012.

FIGURE

4.C-4

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As summarized in **Table 4.C-2**, *Jurisdictional Features,* Cartago Creek supports approximately 0.06 acre of ACOE/RWQCB jurisdictional "waters of the U.S.," and 0.12 acre of CDFG jurisdictional streambed and riparian habitat. Of this, approximately 0.05 acre of ACOE/RWQCB and CDFG jurisdictional waters are associated with a man-made ditch that appears to divert flow across the property from Cartago Creek into adjacent wetlands. No wetlands were determined to occur in Cartago Creek and/or within the man-made ditch located within the study area.

Table 4.C-2

Jurisdictional Features

Jurisdictional Feature	ACOE/RWQCB Jurisdiction (Acres)	CDFG Jurisdiction (Acres)
Cartago Creek*	0.06	0.19
Owens Lake Playa Wetlands	(5.97)	(5.97)
TOTAL	**6.03(5.97)**	**6.16 (5.97)**

**The total for Cartago Creek is inclusive of the man-made ditch*
*** Acreage in parentheses indicates acreage of wetlands and are a subset of the total, not additive.*

Source: PCR Services Corporation, 2012.

Owens Lake Playa Wetlands

The study area supports fringe wetland marsh habitat located along the southerly edge of the Owens Lake Playa[10]. Based on the Hydrogeologic Evaluation for the Crystal Geyser Alpine Spring Water Roxanne Operations Facility Expansion, Cartago, Inyo County, California (Richard C. Slade & Associates LLC 2012), the study area supports a series of groundwater springs and seeps including, but not limited to, a fault scarp identified as the Spring Line fault in the hydrogeology technical report, which is located south of the study area. The hydrogeology report suggests that the primary source of hydrology in the region is provided by shallow groundwater aquifers supported by local runoff and snowmelt. The springs and scarps within the study area and scattered throughout the greater Owens Lake Playa are the result of geologic fracturing or faulting known to occur throughout the region, which results in artesian groundwater conditions due to the confinement of groundwater along these faults. Although faults that support artesian flow such as the Spring Line fault occur in proximity to the site, it's not possible to determine to what extent the Spring Line fault or any other geologic fractures directly contribute to the Owens Lake Playa wetlands. This was evident during PCR's examination of the study area, where areas directly off-site to the southeast of the proposed project boundary exhibited groundwater at the surface, yet wetlands observed within the study area were completely dry and supported only transitional wetland vegetation. Therefore, the primary component of hydrology supporting wetlands within the study area is likely groundwater, which is supplemented by surface hydrology from Cartago Creek during portions of the year, where both groundwater and surface

[10] *The limits of the Owens Lake Playa are estimated to support over 70,000 acres of dry lake bed associated with the historic Owens Lake as documented by the "Delineation of Waters of the United States for the Owens Lake Playa" prepared by Jones & Stokes, Inc. on behalf of the ACOE (1996).*

hydrology are directly associated with local runoff and snowmelt. Mexican rush is the dominant plant species found in the wetland marsh. However, a portion of a slightly drier transitional community identified as salt grass flats borders the rush dominated marsh to the east. Only a portion of the salt grass flats (approximately 0.75 acre) were deemed to support wetlands due to a lack of hydric soils in the remainder of that vegetation community. A more detailed discussion of Mexican rush marsh and salt grass flats vegetation communities are provided in Section b.(1) above.

Other plant species observed within the marsh habitat includes small-flowered bulrush (*Scirpus microcarpus*), yerba mansa (*Anemopsis californica*), alkali pink (*Nitrophila occidentalis*), salt grass, and blue wild rye. Several non-native wetland species were found including five-hook bassia (*Bassia hyssopifolia*), beard grass (*Polypogon monspeliensis*), and invasive red-stem filaree (*Erodium cicutarium*). Soils associated with the wetland marsh are classified as Typic Psammaquents by the Natural Resource Conservation Service within the study area (Soil Survey Staff 2012), and were determined to support a sandy loam soil texture underlain by a less permeable sandy clay loam soil texture in the field (see **Appendix C,** *Wetland Data Sheets*).

The study area supports approximately 5.97 acres of ACOE/RWQCB and CDFG jurisdictional wetlands as summarized in Table 4A-2.

(8) Non-Jurisdictional Features

As depicted on Figure 4A-3, *Jurisdictional Features*, the study area supports a man-made non-jurisdictional swale and several man-made depressional features associated with an abandoned subdivision plan. The following provides a discussion of the features that do not appear to support ACOE, RWQCB, and CDFG jurisdiction.

Swale

As mentioned in the discussion of Cartago Creek above, the downstream terminus of the man-made ditch, an approximately 552 linear foot swale, within the study area does not support indicators of ordinary flow. Surface flows have eroded and created this swale that appears to divert flow toward the Owens Lake Playa. The swale is dominated by upland habitat. The swale feature, depicted on Figure 4A-3, is not likely subject to jurisdiction by the ACOE, RWQCB, and the CDFG.

Remnant Man-Made Depressions

The study area contains eight (8) remnant, man-made depressions that appear to have been created as part of an abandoned subdivision concept dating back to the early 1980s that would have included a depressional "pond" feature for each lot, similar to an existing model home configuration that remains just west of the study area boundary. Some of the "pond" features appear to have been concrete-lined as they support broken pieces of concrete throughout. The "ponds" seem to have been designed to connect hydraulically along the surface via a network of concrete-lined swales that do not support indicators of flow. Red willow trees appear to have been planted around each of the depressional areas. These remnant, man-made depressions range from approximately 75-200 linear feet in length and 15-35 feet in width and have no natural upstream watershed. No ponded water, wetlands, and/or vernal pool habitat was observed within the "pond" features which are dominated by willow leaf litter and upland vegetation. Moreover, no

indicators of flow such as an ordinary high water mark and/or a defined bed and bank were observed within the features, or within the concrete swales that may have connected the "ponds" hydraulically in the past. Therefore, the remnant man-made depressions, depicted on Figure 4A-3, are not considered to be subject to the jurisdiction of the ACOE, RWQCB, and CDFG.

2. ENVIRONMENTAL IMPACTS

a. Thresholds of Significance

Appendix G of the *CEQA Guidelines* contains the Initial Study Environmental Checklist form used during preparation of the project Initial Study (contained in **Appendix A** of this EIR). The Initial Study Environmental Checklist questions relating to biological resources have been utilized as the thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service.

BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service.

BIO-3: Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.), through direct removal, filling, hydrological interruption, or other means.

BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

BIO-5: Conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan or Recovery Plan.

The biological resources within the study area were evaluated on the basis of the above criteria in determining whether or not the proposed project would cause one or more significant impacts. The evaluation of whether an impact on biological resources would be significant considered the resource and how that resource fits into a regional or ecological context.

The definition of "significant," as applied for this assessment, considers both the local and regional status of each resource. Significant impacts are those that would substantially diminish or result in the loss of an important biological resource or conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes adverse but not significant because, although they would result in an

adverse alteration of existing local conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population-wide or region-wide basis.

b. Methodology

(1) Literature Review

The study began with a review of relevant literature on the biological resources within the boundaries of the proposed project and the surrounding vicinity. The CNDDB, a CDFG species account database, was reviewed for all pertinent information regarding the localities of known observations of sensitive species in the vicinity of the study area. The USFWS Listed Species Occurrences Data Base and CNPS Online Inventory were also reviewed. The Federal Register listings, species-specific survey protocols, as well as species data provided by the USFWS and CDFG were reviewed in conjunction with anticipated Federal and State-listed species and sensitive plant communities potentially occurring within the vicinity. In addition, regional flora and fauna field guides were utilized in the identification of species and suitable habitats. These sources and other references reviewed, including the *Biological Resources Reports* prepared by Montgomery Watson (1996), and *DEIR Crystal Geyser Roxane: Beverage Bottling Plant Light Industrial Project SCH#2002121051* (2004), provided a baseline from which to inventory the biological resources potentially occurring within the study area. This section is also based, in part, on documentation contained in **Appendix C** of this Draft EIR, which includes a *Floral and Faunal Compendium* and *Wetland Data Sheets*.

(2) Field Investigation

PCR environmental scientist Amir Morales and biologists Ezekiel Cooley and Bob Huttar performed a general biological investigation of the study area on February 8, 2012 The purpose of the general survey was to identify potential habitat for any threatened, endangered, or otherwise sensitive species that may occur within the study area. In addition, the study area was assessed to determine if any waters and/or wetlands potentially falling under the jurisdiction of the ACOE, RWQCB, and/or CDFG occurred on-site. During all field surveys, an inventory of all plant and wildlife species observed was compiled (**Appendix C,** *Floral and Faunal Compendium*). Special attention was paid to areas potentially supporting sensitive habitats and sensitive plant and wildlife species.

(a) Natural Community Mapping

Natural communities were mapped with the aid of an aerial photograph and a topographic map. Boundaries were delineated directly onto the aerial photograph while in the field and then digitized using Geographic Information System (GIS) technology to calculate acreages. Natural community names and hierarchical structure follows the CDFG Natural Communities List (2012). Descriptions were based on PCR findings and descriptions contained in Sawyer, Keeler-Wolfe, and Even's *A Manual of California Vegetation. Second Edition* (2008) and Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California* (1986). Scientific names are employed upon initial mention of each species; common names are employed thereafter.

(b) General Plant Inventory

All plant species observed during surveys were either identified in the field or collected and later identified using taxonomic keys. No surveys specifically for sensitive plants were conducted. Plant taxonomy follows *The Jepson Manual, Second Edition* (Baldwin 2012). Because common names vary significantly between

references, scientific names are included upon initial mention of each species; common names consistent throughout the report are employed thereafter. All plant species observed by PCR biologists are included in **Appendix C,** *Floral and Faunal Compendium.*

(c) General Wildlife Inventory

All wildlife species observed during the field investigation by sight, call, tracks, nests, scat (fecal droppings), remains, or other sign were recorded. No surveys specifically for sensitive animals were conducted. Binoculars and taxonomic keys were utilized in the field for the identification of wildlife, as necessary. Wildlife taxonomy follows Stebbins (2003) for amphibians and reptiles, the American Ornithologists' Union (1998) for birds, and Jameson and Peeters (1988) for mammals. Because common names vary significantly between references, scientific names are included during the first mention of a species; common names are used thereafter. A complete list of wildlife species observed within the study area is provided in **Appendix C,** *Floral and Faunal Compendium.*

(d) Regional Connectivity/Wildlife Movement Corridor Assessment

The analysis of wildlife movement corridors associated with the study area and its immediate vicinity is based on information compiled from the literature, input from wildlife agency personnel, observations made in the field during survey work for groundtruthing and fine-scale refinement, and analysis of aerial photographs and topographic maps. A literature review was conducted that included documents on island biogeography (studies of fragmented and isolated habitat "islands"), reports on wildlife home range sizes and migration patterns, and studies on wildlife dispersal. Wildlife movement studies conducted in southern California were also reviewed including *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California* (Spencer, W.D., et al 2010). The relationship of the study area to large open space areas in the immediate vicinity (i.e., Owens Valley) was also evaluated in terms of connectivity and habitat linkages.

Relative to corridor issues, the focus of this assessment was to determine if the alteration of current land use within the study area will have potentially significant impacts on the regional movement of wildlife. Notation was made during field visits of locations of animal sign and inspection of resource maps for the vicinity. Conclusions contained in the report are based on the knowledge of desired topography and resource requirements for wildlife potentially utilizing the study area and vicinity.

(e) Jurisdictional Delineation of Wetlands, "Waters of the U.S.," and "Waters of the State"

Amir Morales and Zeke Cooley of PCR conducted a jurisdictional delineation of the study area on February 8, 2012. The purpose of the survey was to determine the presence of any areas subject to the jurisdiction of the ACOE, CDFG, and/or RWQCB. Where warranted, all areas that were identified as being potentially subject to the jurisdiction of the ACOE, RWQCB, and/or the CDFG were field verified and mapped. The potential for "waters of the U.S." and "waters of the State" were investigated based on the absence or presence of an ordinary high water mark (OHWM), or if not clearly visible, as determined by erosion, the deposition of sediments or debris, and the establishment of and/or changes in vegetation. If any of these criteria were met, a series of transects were run to determine the extent of jurisdictional non-wetland "waters of the U.S." and "waters of the State." Identified non-wetland "waters of the U.S." and "waters of the State" were traversed within or along the channel, and the OHWM was measured. Where no accessible route led to the channel, the distance to the top of the channel was estimated by visually examining the terrain and density of

vegetation. An estimated average OHWM width was then applied based on the last measurable channel width. Where channels diverged to form low, intermediate areas between the channels, the entire area between the outermost edges of each channel was considered within the OHWM. Where the intermediate area was equal to or above the height of the uppermost bank of either channel, the OHWM was recorded individually for each channel. The CDFG jurisdiction was defined to the bank of the stream/channels or to the limit of the adjacent riparian vegetation. ACOE jurisdictional wetlands were delineated using a routine determination according to the methods outlined in the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987), and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (ACOE 2008a) based on hydrologic and edaphic features of the study area and on the vegetation community composition of each area being investigated. If applicable, in areas where jurisdictional wetlands were suspected, data on vegetation, hydrology, and soils was collected along transects.

c. Project Features

The project proposes a spring water bottling facility and ancillary uses. The water bottling facility would include an approximately 198,500-square foot bottling plant and an approximately 40,000 square-foot storage warehouse. Ancillary uses to the bottling facility would include a fire suppression building, stormwater retention basin, leach mound, fire access road, and parking and truck staging area. To provide adequate access from US 395 to the bottling facility, the project would remove the existing access road (i.e., Cabin Bar Ranch Road) and construct a new permanent access road approximately 2,500 feet to the south.

The bottling facility would use spring water from three existing production wells located in the central portion of the 420-acre ranch. The proposed project would also draw from a fourth existing well to provide domestic potable water to the water bottling facility.

d. Analysis of Project Impacts

(1) Impacts to Sensitive Species

BIO-1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Special Status Plants

Implementation of the proposed project would result in the direct removal of numerous common plant species within the study area. A list of plant species observed within the study area is included in **Appendix C**, *Floral and Faunal Compendium*. Common plant species present within the study area occur in large numbers throughout the region and their removal does not meet the significance thresholds defined in Section 2a, *Thresholds of Significance,* above. Therefore, impacts to common plant species would be considered a less than significant impact and no mitigation measures would be required.

Many of the sensitive plant species discussed in Section 1b(3), *Sensitive Plant Species* may occur within the region, but are not expected to occur within the study area due to the lack of suitable habitat or because the

study area is outside of the known range or elevation for these species. This list of species includes: Ramshaw Meadows abronia, Kern Plateau milk-vetch, common moonwort, pygmy pussypaws, rosette cushion cryptantha, Olancha Peak buckwheat, Sharsmith's stickweed, Kern Plateau horkelia, Father Crowley's lupine, bog sandwort, sweet-smelling monardella, Letterman's blue grass, tundra thread-moss, Dedecker's clover. Therefore, no impacts would occur to these sensitive plant species and no mitigation measures would be required.

As previously stated, no sensitive plants were observed during the field survey; focused surveys were not conducted within the study area during the biological assessment. However, environmental conditions in which several of the sensitive plant species have been known to occur have similarities with those of the study area, thus there is potential for several sensitive plant species to occur on-site. Focused surveys are recommended for the following species which have potential to occur due to the presence of potentially suitable habitat: Tulare rockcress, upswept moonwort, scalloped moonwort, mingan moonwort, Kern Plateau bird's beak, sanicle cymopterus, Kern River fleabane, field ivesia, creamy blazing star, Charlotte's phacelia, Parish's popcorn-flower, Bailey's greasewood, Owen's Valley checkerbloom, cut-leaf checkerbloom, marsh arrow-grass, and grey-leaved violet. Surveys should be conducted for these plants during the appropriate seasons making sure to encompass the flowering periods of all potentially present sensitive plants. Based on known blooming periods, it is recommended that three sensitive plant surveys be conducted to maximize the chance to observe each species during its blooming period during April, May/June, and August. The location of any observed sensitive plant species will be recorded and mapped, if detected.

The Owen's Valley checkerbloom, a State Endangered species, is found only in the Owen's Valley. The town of Cartago is at the southernmost edge of its distribution range and there are records of it occurring in only three locations near the town. CNDDB records show that in 1988 approximately 1,500 – 2,000 plants were found on the Cabin Bar Ranch property in one of the former pasture areas, which is approximately 1,300 feet to the south of the study area. In 1999, another population was recorded approximately one mile to the south-southeast and again, in 2002, another population was reported one mile to the north-northeast. According to Sally Manning, president of the local Bristlecone Chapter of the CNPS, currently this species is not known to occur in any other locations in the vicinity (pers. comm. Manning 2012). At Cabin Bar Ranch there have been no subsequent significant alterations to the pastures since 1988 and focused surveys will determine whether the plant is still there.

Should the State-listed Owen's Valley checkerbloom or any CRPR List species be found on-site and impacts are determined to be potentially significant, mitigation would be required. Mitigation measures described in Section 3.2a below will reduce these impacts to a less than significant level.

Special Status Wildlife

No focused sensitive wildlife surveys were conducted during the field survey. Sensitive wildlife species known to occur within the vicinity but not expected to occur on-site due to lack of suitable habitat or because the project area is outside of the known elevation or distribution range for the species include: Yosemite toad, pallid bat, western snowy plover, California wolverine, Pacific fisher, Volcano Creek golden trout, Sierra Nevada bighorn sheep, Sierra Madre yellow legged-frog, American badger, Le Conte's thrasher, and Sierra Nevada red fox.

The study area is located outside the northern edge of the geographic range of the desert tortoise (USFWS 2011) and is not located within a Bureau of Land Management (BLM)-designated Desert Wildlife Management Area. The nearest USFWS designated critical habitat for the desert tortoise is 66 miles to the south-southeast. Other than the one occurrence reported to the CNDDB in 2006 of a single male tortoise approximately 2.4 miles to the north of the study area, the closest occurrences are over 13 miles to the south and in the same year. Based on correspondence with CDFG, it is believed the single male recorded north of the study area is an outlier and was most likely a released tortoise (pers. comm. Elsworth 2012). Although the rubber rabbitbrush scrub located in the northern section of the study area is potentially suitable habitat for the species, its limited area of 8.98 acres is inadequate to support a single desert tortoise individual. A female desert tortoise requires a home range of approximately 100 acres while a male requires twice as much area (USFWS 2010). Thus, for these reasons, the presence of desert tortoise is not expected and surveys are not recommended.

Sensitive wildlife species that may have some potential to occur due to the presence of suitable habitat on-site include Owen's tui chub, Owen's pupfish, Swainson's hawk, loggerhead shrike, yellow breasted chat, least bittern, least Bell's vireo, spotted bat, Owen's Valley vole, and Mohave ground squirrel.

California Species of Special Concern

Loggerhead shrike, yellow breasted chat, least bittern, spotted bat, and Owen's Valley vole are California Species of Special Concern, but are not Federal- or State-listed species. Implementation of the proposed project will impact habitat which may potentially be used by loggerhead shrike and spotted bat (for foraging only as spotted bat is not expected to roost on-site); however, if these SSC species are present within the study area, any loss of individuals from implementation of the proposed project would not threaten regional populations due to the large areas of habitat surrounding the study area that will be available for these species to utilize.

Due to the limited suitable habitat found within the region (i.e., limited red willow thicket within Owens Valley), surveys for this yellow breasted chat will be conducted concurrently with surveys for least Bell's vireo in order to determine its presence or absence. If large populations of the yellow breasted chat are found on-site, impacts would be potentially significant, and mitigation would be required. Mitigation measures described in Section 3.2a below will reduce these impacts to a less than significant level.

Due to the degraded nature of the habitat on-site, and the presence of other ponds and available water sources found immediately adjacent to the study area which provides higher quality habitat to support the least bittern, impacts to this species would be considered less than significant. No mitigation is required.

Records in CNDDB and in a DEIR prepared for a larger site which included the current study area (Montgomery Watson 1993) indicate that the Owen's Valley vole was found in the study area in 1989 "along fence lines, in unflooded swales and beneath taller vegetation and along canal banks." Although the finding is not recent, these structural features are still present on-site and this species has potential to occur on-site. Although there are few records in the CNDDB of the vole being found in the vicinity, recent studies indicate this species is not uncommon on the margins of marsh habitats in the Owen's Valley. In the summer of 2011, the CDFG conducted studies of the vole, including trapping, in several locations in the Owen's Valley. According the CDFG, it was reported that trapping studies in the Cartago and Olancha areas found the vole in many of the survey sites investigated (pers. comm. Hawk 2012). The amount of suitable habitat within the

study area is very small in comparison to the extensive marsh in the vicinity and its loss would not significantly affect the survival of the sub-species. Thus, focused surveys for the owen's Valley vole are not recommended and mitigation is not warranted (pers. comm. Hawk 2012).

Historically, impacts to the Wong's springsnail resulted from grazing and water diversions for mining operations. At present, however, populations of the species are considered to be stable (Furnish 2007). When the stable population trend is considered along with the small area of potential impact to Cartago Creek (road overpass), potential impacts to Wong's springsnail and its habitat would not be significant. That is, no impounding or diverting of flows in Cartago Creek are proposed and, if present, any populations of the species on-site will not be jeopardized. Because no potentially significant impacts to Wong's springsnail are expected, no mitigation is warranted.

Federal- and State-Listed Species

The Owen's tui chub is a Federal and State Endangered species. As previously mentioned, although there does not appear to be suitable habitat for the Owen's tui chub on-site (i.e., lack of the presence of water since the drainage features on-site were dry at the time of the site visit), due to the multiple occurrences in the vicinity and the presence of the ephemeral Cartago Creek, dried ponds, and irrigation ditches within the study area, a habitat assessment and, if warranted, pre-construction surveys by a local specialist are recommended in order to determine its presence or absence. Should the Owen's tui chub be found on-site and impacts are determined to be potentially significant, mitigation would be required. Mitigation measures described in Section 3.2a below will reduce these impacts to a less than significant level.

The Owen's pupfish is a Federal and State Endangered species. As previously mentioned, although there does not appear to be suitable habitat for the Owen's pupfish on-site (i.e., lack of the presence of water since the drainage features on-site were dry at the time of the site visit), due to the occurrence and the presence of the ephemeral Cartago Creek, dried ponds, and irrigation ditches within the study area, a habitat assessment and, if warranted, pre-construction surveys by a local specialist are recommended in order to determine its presence or absence. Should the Owen's pupfish be found on-site and impacts are determined to be potentially significant, mitigation would be required. Mitigation measures described in Section 3.2a below will reduce these impacts to a less than significant level.

As previously mentioned, although there are no recorded occurrences of the Swainson's hawk on-site, the study area supports potentially suitable habitat for the species; thus focused surveys to determine presence or absence of the Swainson's hawk and any nesting sites are recommended. Should the Swainson's hawk be found on-site and impacts are determined to be potentially significant, mitigation would be required. Mitigation measures described in Section 3.2a below will reduce these impacts to a less than significant level.

The least Bell's vireo is a Federal and State Endangered species. As previously stated, although there are no recorded occurrences of the least Bell's vireo on-site, this species was recorded 1 mile south of the study area, and the study area supports potentially suitable habitat for the species, red willow thicket; thus, focused surveys to determine presence or absence of the least Bell's vireo are recommended. Should the least Bell's vireo be found on-site and impacts are determined to be potentially significant, mitigation would be required. Mitigation measures described in Section 3.2a below will reduce these impacts to a less than significant level.

The Mohave ground squirrel is a State Threatened species. As previously mentioned, although there are no recorded occurrences of the Mohave ground squirrel on-site, the study area supports potentially suitable habitat for the species, open desert scrub and alkali scrub; thus, focused surveys to determine presence or absence of the Mohave ground squirrel are recommended. Should the Mohave ground squirrel be found on-site and impacts are determined to be potentially significant, mitigation would be required. Mitigation measures described in Section 3.2a below will reduce these impacts to a less than significant level.

(2) Impacts to Sensitive Plant Communities

BIO-2: *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?*

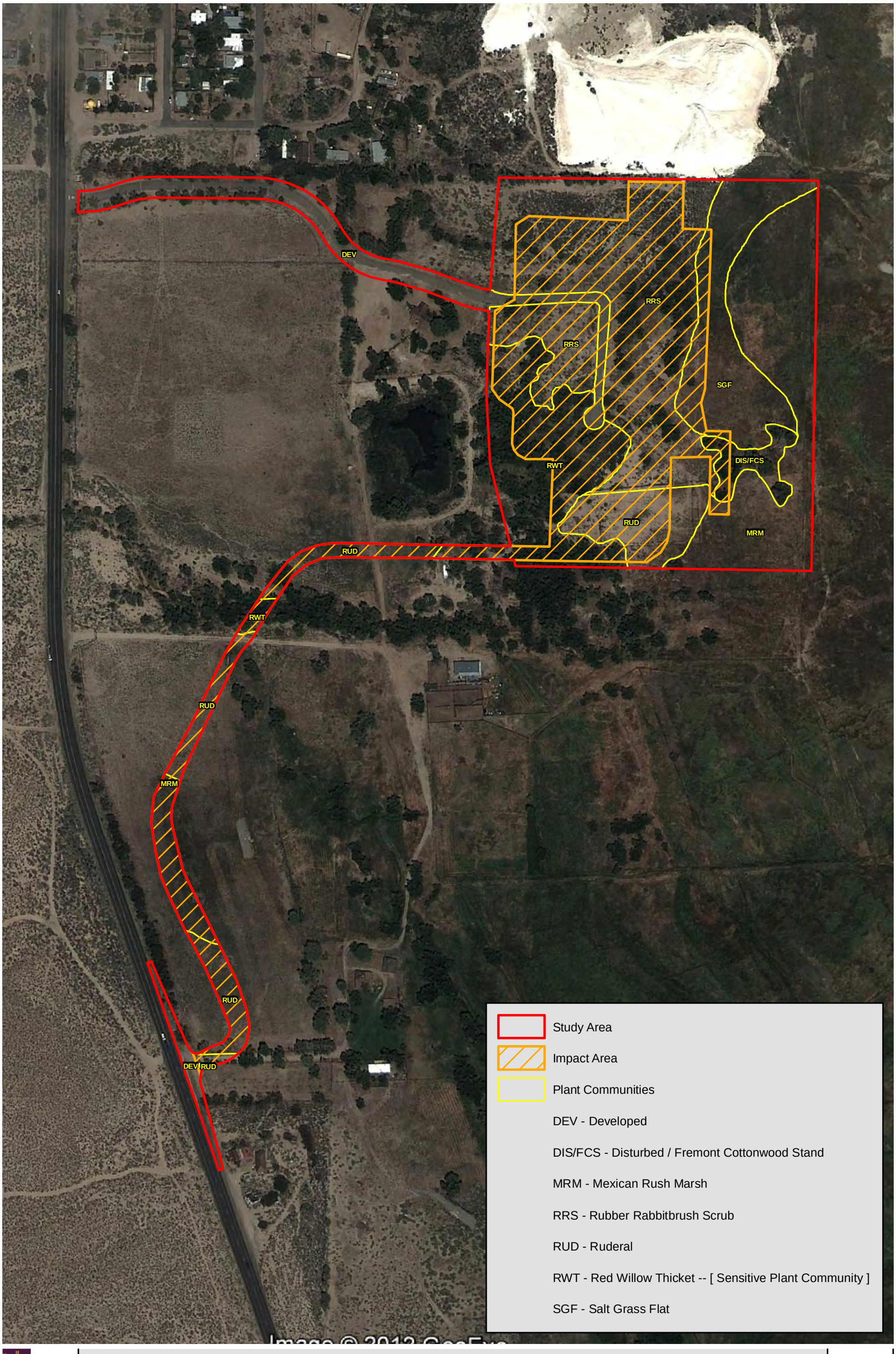
One sensitive plant community, red willow thicket (*Salix laevigata* Woodland Alliance) (G3S3, California Code 61.205.01), occurs within the study area. A total of 4.20 acres of red willow thicket occurs on-site, of which 2.88 acres would be impacted by the proposed project, as show in **Figure 4.C-5**, *Impacts to Plant Communities*. Although there is red willow thicket off-site which will be avoided by the proposed project to the south and west, there appears to be few other willow riparian areas within the vicinity. Impacts to this sensitive plant community are considered potentially significant. Mitigation provided below in Section 3.2b would reduce this impact to a less than significant level.

(3) Impacts to "Waters of the U.S.," "Waters of the State," and Wetlands

BIO-3: *Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

The study area supports a total of approximately 6.03 acres of ACOE/RWQCB jurisdictional "waters of the U.S." and 6.16 acres of CDFG jurisdictional streambed and associated riparian habitat, of which approximately 5.97 acres are wetlands. Approximately 0.06 acres of non-wetland ACOE/RWQCB jurisdictional "waters of the U.S." and 0.19 acres of CDFG jurisdictional streambed occurs within the portion of Cartago Creek and the man-made ditch that cross the study area. Cartago Creek is an intermittent tributary drainage that conveys flow toward the on-site wetland area. The 5.97 acres of wetlands within the study area exists in the eastern portion of the study area, immediately adjacent to the approximately 74,000-acre Owens Lake Playa.

Implementation of the proposed project will result in permanent impacts through removal of approximately 0.01 acres of non-wetland ACOE/RWQCB "water of the U.S." and 0.12 acres of CDFG jurisdiction associated with Cartago Creek, in order to install a culvert crossing. The project would also result in permanent impacts through removal of approximately 0.03 acres of unvegetated non-wetland ACOE/RWQCB jurisdiction and 0.04 acre of CDFG jurisdiction within an unvegetated man-made swale to construct the main bottling facility. Therefore, permanent impacts through removal to non-wetland ACOE/RWQCB "waters of the U.S." totals approximately 0.04 acres, and permanent impacts to non-wetland CDFG jurisdictional resources total 0.16 acres for the proposed project, as shown in **Figure 4.C-6**, *Impacts to Jurisdictional Features*. Impacts to jurisdictional waters are considered potentially significant. Mitigation to reduce these impacts to a less than significant level is provided in Section 3.2.c.



PCR

N

0 250 500 Feet

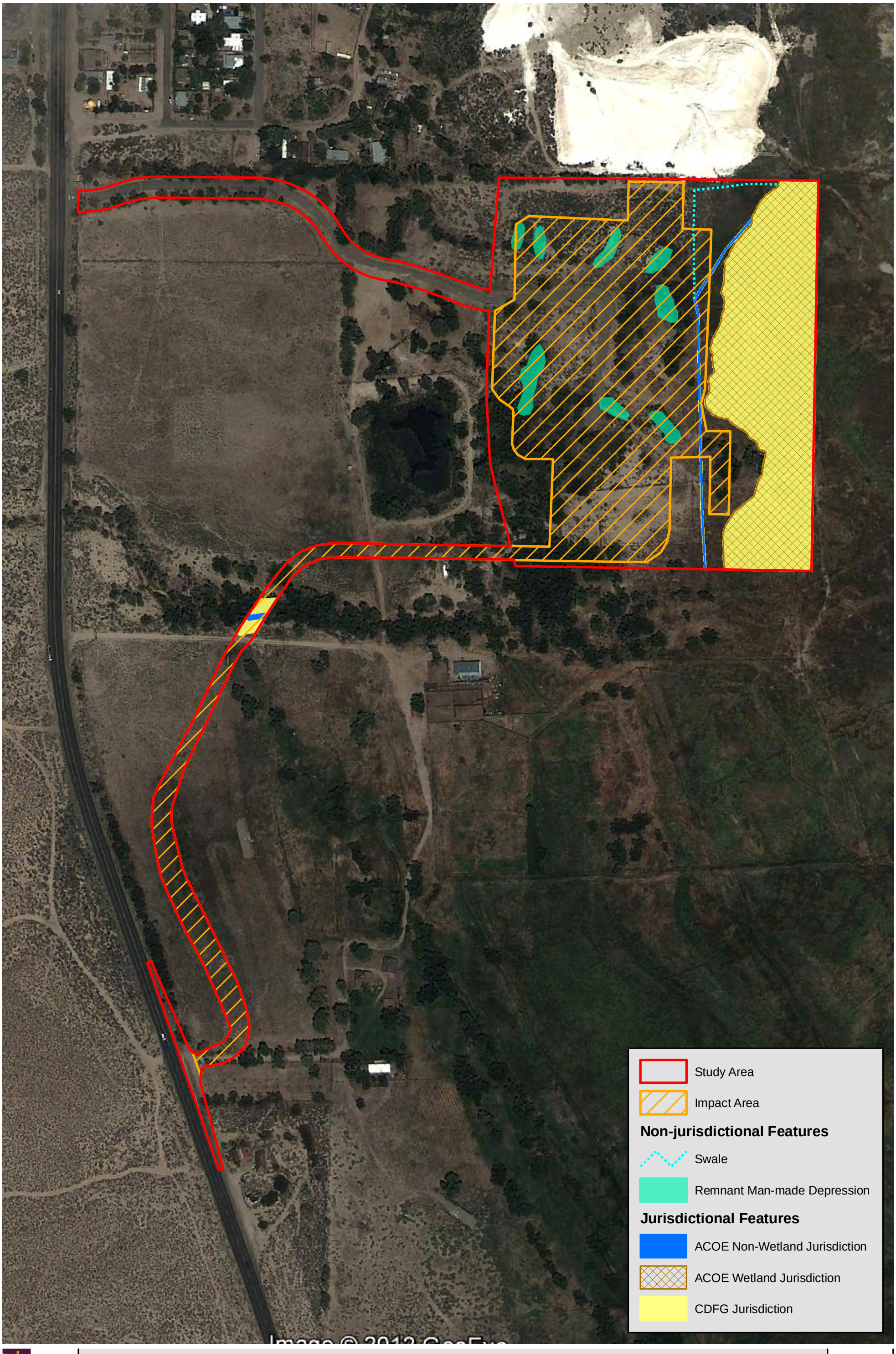
Impacts to Plant Communities

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: Google Earth, 2011; PCR Services Corporation, 2012.

FIGURE

4.C-5



PCR

N

0 250 500 Feet

Impacts to Jurisdictional Features

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: Google Earth, 2011; PCR Services Corporation, 2012.

FIGURE

4.C-6

Project implementation also has the potential to result in permanent impacts on jurisdictional resources as the result of seasonal lowering of the groundwater table due to pumping. As stated in **Section 4.G,** *Hydrogeology and Surface Hydrology*, of this Draft EIR, under the "long-term" scenario, with a combined average pumping rate of 170 gallons per minute (gpm) throughout the year, the decrease in spring flow along the Spring Line fault was estimated to be approximately 17 percent. Under a short-term, high-production pumping scenario, with a combined average pumping rate of 500 gpm during the three-month summer period, the decrease in flows along the Spring Line fault due to reduced groundwater levels were estimated to be approximately 38 percent. Pumping rates would be reduced following the summer high-production period, and the aquifer and any associated spring faults would likely return to pre-summer levels.

Project-related groundwater pumping, assuming a year-round average pumping rate of 225 gpm, was calculated to translate to a theoretical drawdown of groundwater levels by 0.54 feet in in wells CGR-1 and CGR-3, near the southern property line of Cabin Bar Ranch, after 30 days of continuous pumping, and a maximum theoretical drawdown of 0.87 feet after 360 days of continuous pumping in piezometer P-12, near the ranch's northern property boundary. Models prepared by previous consultants and cited in the *Hydrogeotechnical Evaluation* predicted groundwater level drawdown of between 0.20 and 0.60 feet in other area wells.

Accordingly, groundwater pumping effects on the water table level may indirectly impact a portion of the playa wetlands and/or riparian vegetation associated with Cartago Creek, the extent of which cannot be accurately determined. Therefore, mitigation to reduce this potential impact to a less than significant level is provided in Section 3.2.c.

(4) Impacts to Wildlife Movement and Migratory Species

BIO-4: *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Impacts to Wildlife Movement

As previously mentioned, the study area is located just west of the Owens Lake Playa within the Owens Valley, which is along the course of the Pacific Flyway, a major migratory wildlife corridor. Although Owens Lake Playa no longer provides the water resources that it historically did, the lake still contains some water and is a resource to both local wildlife species and those moving through the region. In addition, the study area is situated south of the CDFG Cartago Wildlife Area. No corridors described in the *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California* (Spencer, W.D., et al. 2010) occur within the study area.

The study area is located along the southwestern margin of the Owens Lake Playa near the existing Crystal Geyser Roxane plant, the rural town of Cartago, and US 395. In comparison with the many square miles of surrounding undeveloped open space which provides higher quality natural habitats than the study area does for wildlife to forage in or travel through, the habitat that the study area supports is somewhat degraded due to previous grazing and livestock ranching activities, and thus does not provide high quality habitat for wildlife. In addition, the developed structures and human activity within the vicinity, as well as

the traffic associated with US 395, would likely deter some wildlife from utilizing the area, especially in comparison to other less disturbed open space areas in the vicinity. However, the native willow, cottonwood, and ash trees within the study area, as well as non-native sycamore and poplar tree stands which were planted on-site, provide tree cover which is limited in the Owens Lake Playa areas. Although implementation of the proposed project would result in the removal of a large number of the trees within the immediate vicinity of the project site, there would still be large mature trees providing canopy cover within the red willow thicket found within Cartago Creek that can be utilized by wildlife. Thus, the removal of canopy cover of the mature trees on-site would be an adverse, but less than significant, impact to wildlife movement.

Impacts to Nesting Birds

The study area has the potential to support both raptor and songbird nests due to the presence of trees, shrubs, and ground cover. Disturbing or destroying active nests is a violation of the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et seq.) and the California Department of Fish and Game Code Sections 3503, 3503.5 and 3513. The statutes make it unlawful to pursue, hunt, take, capture, kill or sell birds listed therein ("migratory birds"). Nesting activity typically occurs from February 15 to August 31. In addition, nests and eggs are protected under Fish and Game Code Section 3503. The removal of vegetation during the breeding season is considered a potentially significant impact. With implementation of the mitigation measure described in Section 3.b below, potentially significant impacts to migratory raptor and songbird species would be reduced to a less than significant level.

(5) Consistency with an Adopted Habitat Conservation Plan

BIO-5: *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan or Recovery Plan?*

The study area does not occur within any Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP) areas. However, approximately 10 acres of the study area is partially within the Southern Owens Conservation Area of the *Owens Basin Wetland Aquatic Species Recovery Plan for Inyo and Mono Counties* (USFWS 1998) ("Recovery Plan"). The goal of the Recovery Plan is to delist Owens pupfish, Owens tui chub, and Fish Slough milk-vetch, and protect the following species of concern so that listing is unnecessary: Owens Valley checkerbloom, Inyo County mariposa lily, Owens speckled dace, Long Valley speckled dace, Owens Valley vole, and the Owens, Fish Slough, and Aardhal's (Benton Valley) springsnails. These are considered Tier 1 species endemic to the wetland and aquatic systems of the Owens Basin. Tier 2 species, also included in the Recovery Plan, consist of species associated with wetland and aquatic ecosystems that also occur outside the Owens Basin, but warrant specific management guidelines to stabilize and enhance populations within the basin, and include the following: silverleaf milk-vetch (*Astragalus argophyllus* var. *argophyllus*), alkali ivesia (*Ivesia kingii* var. *kingii*), hot springs fimbristylis (*Fimbristylis thermalis*), Inyo phacelia (*Phacelia inyoensis*), Owens sucker (*Catstomus fumeiventris*), least Bell's vireo, southwestern willow flycatcher (*Empidonax traillii extimus*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), least bittern, western snowy plover, yellow warbler (*Dendroica petechia brewsteri*), and yellow-breasted chat.

The following Recovery Plan species have already been addressed in Section 2d(1) above: Owens Valley checkerbloom, Owens pupfish, Owens tui chub, least Bell's vireo, western snowy plover, least bittern, yellow-breasted chat, and Owens Valley vole.

Due to the lack of suitable habitat or because the study area is outside of the known range or elevation for these species, the following Recovery Plan species, which were not analyzed in Section 2d(1) above, are not expected to occur: hot springs fimbristylis, Owens springsnail, Fish Slough springsnail, Aardhal's springsnail, Long Valley speckled dace, Owens sucker, southwestern willow flycatcher, and western yellow-billed cuckoo.

The following Recovery Plan species, which were not analyzed in Section 2d(1), above, have potential to occur within the study area: Fish Slough milk-vetch, Inyo County mariposa lily, silverleaf milk-vetch, alkali ivesia, Inyo phacelia, Owens speckled dace, and yellow warbler.

There is low potential for Fish Slough milk-vetch (FT, CRPR List 1B.1), Inyo County mariposa lily (CRPR List 1B.1), silverleaf milk-vetch (CRPR List 2.2), alkali ivesia (CRPR List 2.2), Inyo phacelia (CRPR List 1B.2) to occur on-site since the study area is within or near the lower elevational range in which these species are found. However, it is recommended that sensitive plant surveys be conducted during the appropriate blooming period for these five species to determine their presence/absence within the study area. The blooming period for each species are June – July for the Fish Slough milk-vetch; April – July for the Inyo County mariposa lily; May – July for the silverleaf milk-vetch; May – August for the alkali ivesia; and April – August for the Inyo phacelia. Should focused surveys determine the presence of any of these plant species and impacts are determined to be significant, mitigation would be required. Mitigation measures described in Section 3.b, below, will reduce these impacts to a less than significant level.

Owens speckled dace is a Species of Special Concern. Although there does not appear to be suitable habitat for the Owens speckled dace on-site (i.e., lack of the presence of water since the drainage features on-site were dry at the time of the site visit), due to the presence of the ephemeral Cartago Creek, dried ponds, and irrigation ditches within the study area, there is a low potential for Owens speckled dace to be found on-site. Due to the limited suitable habitat found within the region (i.e., limited streams and springs within Owens Valley), surveys for this species will be conducted concurrently with the habitat assessment and, if warranted, pre-construction surveys by a local specialist is recommended for the Owen's tui chub and Owen's pupfish in order to determine its presence or absence. If large populations of the Owens speckled dace are found on-site, impacts would be potentially significant, and mitigation would be required. Mitigation measures described in Section 3.b, below, will reduce these impacts to a less than significant level.

Yellow warbler is a Species of Special Concern. Due to the limited suitable habitat found within the region (i.e., limited red willow thicket within Owens Valley), surveys for this species will be conducted concurrently with surveys for least Bell's vireo in order to determine its presence or absence. If large populations of the yellow warbler are found on-site, impacts would be potentially significant, and mitigation would be required. Mitigation measures provided in Section 3.b, below, would reduce these impacts to a less than significant level.

With implementation of the mitigation measures addressing the species in the *Basin Wetland Aquatic Species Recovery Plan* as appropriate, the proposed project would be consistent with this plan.

As mentioned in Section 1.0, above, the study area is within the vicinity of the Owens Lake Habitat Management Plan and the Owens Valley Land Management Plan. Although approximately 24 acres of the study area is within the Owens Lake Playa, the proposed project avoids the lakebed and therefore would not conflict with the Owens Lake Habitat Management Plan. In addition, the study are does not fall within City of Los Angeles-owned lands, and thus would not conflict with the Owens Valley Land Management Plan.

3. MITIGATION MEASURES

a. Approach

Mitigation measures for impacts considered to be potentially "significant" were developed in an effort to reduce such impacts to a level of "less than significant," while at the same time allowing the Applicant an opportunity to realize development goals. As stated in CEQA Section 15370 mitigation includes:

- Avoiding the impact altogether by not taking a certain action or parts of an action.
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- Compensating for the impact by replacing or providing substitute resources or environments.

b. Mitigation Measures for Potentially Significant Impacts

The following mitigation measures address potentially significant impacts associated with the implementation of the proposed project. It should be noted that focused surveys have not been conducted within the study area and presence or absence of some of these resources (i.e., sensitive plants and wildlife) has not been conclusively established; however, this discussion provides mitigation for impacts that would be potentially significant if such resources were found on-site. Focused surveys shall be conducted during appropriate survey seasons.

The following mitigation measures address the potentially significant impacts from the proposed project on sensitive plant species, sensitive wildlife species, sensitive plant communities, jurisdictional features, and nesting birds.

(1) Measures to Mitigate Potentially Significant Impacts to Sensitive Species

Mitigation Measure BIO-1a: Should focused surveys determine the presence of the Owen's Valley checkerbloom, Fish Slough milk-vetch, Inyo County mariposa lily, silverleaf milk-vetch, alkali ivesia, Inyo phacelia, or any other sensitive plant species and impacts are determined to be significant, impacts to the species shall be avoided or minimized to the maximum extent practicable. If impacts to the sensitive plant species cannot be avoided, mitigation shall include one or more of the following measures at a mitigation-to-impact ratio of no less than 1:1, along with the preparation of a Species Mitigation and Monitoring Plan (SMMP), as appropriate, which would reduce impacts to less than significant. The Applicant shall work with a biologist or restoration specialist

experienced with planning and implementing mitigation for special status plants in California.

- Prior to disturbance activities, on- or off-site transplantation and/or seed and topsoil collection and seeding of individual plant species to a site where suitable habitat conditions exist shall be implemented. The Applicant shall ensure that the impacted plant species is restored at an appropriate off-site location. Restoration shall be implemented by the following measures:
  - For the Owen's Valley checkerbloom, all plant specimens shall be counted and all specimens within potential impact areas retained in place until they become dormant and the seed can be collected. Seed shall be stored in brown paper bags in a cool location until they have fully dried out and the seeds dehisced. Seeds must be planted within two years to assure preservation of the seed crop. If not planted in a designated mitigation site, seeds shall be propagated at a native plant nursery in pots until they may be outplanted to the mitigation site. As appropriate, this methodology may be used for other plant species, if present, as recommended by a biologist or restoration specialist experienced with special status plants in California.
- Identify an appropriate off-site receptor area within the local watershed that has been designated for conservation (or shall be conserved) and where permission has been secured from the landowner / manager to accept a transplanted population of special plant species. The site shall be suitable and comparable-sized until a 1:1 ratio is met for the number of individuals and/or habitat impacted, as determined appropriate by a biologist or restoration specialist experienced with special status plants in California. The Applicant shall be responsible for locating the off-site area, securing permission from the owner or management entity for the site(s) to receive seed or transplanted specimens, the success of the restoration, and to ensure the off-site area is conserved in perpetuity by a conservation entity.
- Payment into an agency-approved off-site mitigation bank or agency-approved in-lieu fee agreement.
- Off-site purchase and set aside and enhancement of land (either in-kind or out-of-kind).

In addition, mitigation areas shall be placed under a conservation easement, deed restriction, or comparable legal instrument which prohibits or restricts land uses that are not compatible with conservation objectives and provides for long-term preservation.

Mitigation Measure BIO-1b

<u>Yellow breasted chat</u>

Should focused surveys determine the presence of the SSC yellow breasted chat and impacts are determined to be significant, impacts to the species shall be avoided or minimized to the maximum extent practicable. If impacts to the species cannot be avoided, mitigation shall include one or more of the following measures at a mitigation-to-impact ratio of no less than 1:1 which would reduce impacts to less than significant:

- On- or off-site creation and/or restoration of 2.88 acres of riparian woodland.

- Payment into an agency-approved off-site mitigation bank or agency-approved in-lieu fee agreement.
- Off-site purchase and set aside and enhancement of land with suitable yellow breasted chat habitat.

In addition, mitigation areas shall be placed under a conservation easement, deed restriction, or comparable legal instrument which restricts land uses and provides for its long-term preservation.

Yellow warbler

Should focused surveys determine the presence of the SSC yellow warbler and impacts are determined to be significant, impacts to the species shall be avoided or minimized to the maximum extent practicable. If impacts to the species cannot be avoided, mitigation shall include one or more of the following measures at a mitigation-to-impact ratio of no less than 1:1 which would reduce impacts to less than significant:

- On- or off-site creation and/or restoration of 2.88 acres of riparian woodland.
- Payment into an agency-approved off-site mitigation bank or agency-approved in-lieu fee agreement.
- Off-site purchase and set aside and enhancement of land with suitable yellow breasted chat habitat.

In addition, mitigation areas shall be placed under a conservation easement, deed restriction, or comparable legal instrument which restricts land uses and provides for its long-term preservation.

Owen's tui chub

Should pre-construction surveys determine the presence of the Federal and State Endangered Owen's tui chub and impacts are determined to be significant, then impacts to the species shall be avoided or minimized to the maximum extent practicable. If impacts to the species cannot be avoided, mitigation shall include one or more of the following measures which would reduce impacts to less than significant:

- Payment into an agency-approved off-site mitigation bank or agency-approved in-lieu fee agreement.
- Off-site relocation.

In addition, mitigation areas shall be placed under a conservation easement, deed restriction, or comparable legal instrument which restricts land uses and provides for its long-term preservation. Furthermore, the Applicant shall coordinate with the USFWS and CDFG to determine the need for a Section 7 consultation in compliance with the Federal Endangered Species Act (ESA) and obtaining an Incidental Take Permit in compliance with the State ESA, respectively.

Owen's pupfish

Should pre-construction surveys determine the presence of the Federal and State Endangered Owen's pupfish and impacts are determined to be significant, then impacts to the species shall be avoided or minimized to the maximum extent practicable. If impacts to the species cannot be avoided, mitigation shall include one or more of the following measures which would reduce impacts to less than significant:

- Payment into an agency-approved off-site mitigation bank or agency-approved in-lieu fee agreement.
- Off-site relocation.

In addition, mitigation areas shall be placed under a conservation easement, deed restriction, or comparable legal instrument which restricts land uses and provides for its long-term preservation. Furthermore, the Applicant shall coordinate with the USFWS and CDFG to determine the need for a Section 7 consultation in compliance with the Federal ESA and obtaining an Incidental Take Permit in compliance with the State ESA, respectively.

Owens speckled dace

Should pre-construction surveys determine the presence of the SSC Owens speckled dace and impacts are determined to be significant, then impacts to the species will be avoided or minimized to the maximum extent practicable. If impacts to the species cannot be avoided, mitigation will include one or more of the following measures which would reduce impacts to less than significant:

- Payment into an agency-approved off-site mitigation bank or agency-approved in-lieu fee agreement.
- Off-site relocation.

In addition, mitigation areas will be placed under a conservation easement, deed restriction, or comparable legal instrument which restricts land uses and provides for its long-term preservation.

Swainson's hawk

The CDFG considers a nest site to be active if it was used at least once during the past 5 years. Impacts to suitable habitat or individual birds within a five-mile radius of an active nest will be considered significant and to have the potential to "take" Swainson's hawks as that term is defined in Fish and Game Code Section 86. Should focused surveys determine the presence of the State Threatened Swainson's hawk and impacts are determined to be significant, impacts to the species shall be avoided or minimized to the maximum extent practicable. If impacts to the species cannot be avoided, mitigation in consultation with the CDFG shall include the following measure which would reduce impacts to less than significant:

- Prepare a Swainson's hawk Monitoring and Mitigation Plan. Plans shall be prepared by a qualified biologist approved by the CDFG and the appropriate lead agency and

include detailed measures to avoid and minimize impacts to Swainson's hawks in and near the construction areas. For example:

- If a nest site is found, design the project to allow sufficient foraging and fledging area to maintain the nest site.
- During the nesting season, ensure no new disturbances, habitat conversions, or other project-related activities that may cause nest abandonment or forced fledging occur within 1/2 mile of an active nest between March 1 and September 15. Buffer zones shall be adjusted in consultation with the CDFG and the lead agency.
- Do not remove Swainson's hawk nest trees unless avoidance measures are determined to be infeasible. Removal of such trees shall occur only during the timeframe of October 1 and the last day in February.

The Monitoring and Mitigation Plan shall also include measures for injured Swainson's hawks as well as focus on providing habitat management lands.

In addition, the Applicant shall coordinate with the CDFG to determine the need for an Incidental Take Permit in compliance with the State ESA.

Least Bell's vireo

Should focused surveys determine the presence of the Federal and State Endangered least Bell's vireo and impacts are determined to be significant, impacts to the species shall be avoided or minimized to the maximum extent practicable. If impacts to the species cannot be avoided, mitigation shall include one or more of the following measures at a mitigation-to-impact ratio of no less than 1:1 which would reduce impacts to less than significant:

- On- or off-site creation and/or restoration of 2.88 acres of riparian woodland.
- Payment into an agency-approved off-site mitigation bank or agency-approved in-lieu fee agreement.
- Off-site purchase and set aside and enhancement of land with suitable Least Bell's vireo habitat.

In addition, mitigation areas shall be placed under a conservation easement, deed restriction, or comparable legal instrument which restricts land uses and provides for its long-term preservation. This mitigation can be satisfied with other riparian-warranted mitigation. Furthermore, the Applicant shall coordinate with the USFWS and CDFG to determine the need for a Section 7 consultation in compliance with the Federal ESA and obtaining an Incidental Take Permit in compliance with the State ESA, respectively.

Mohave Ground Squirrel

Should focused surveys determine the presence of the State Threatened Mohave ground squirrel and impacts are determined to be significant, impacts to the species shall be avoided or minimized to the maximum extent practicable. If impacts to the species cannot be avoided, mitigation in consultation with the CDFG shall include one or more of

the following measures at a mitigation-to-impact ratio of no less than 1:1 which would reduce impacts to less than significant:

- Relocation of the species by a qualified biologist who shall manage the safe capture of the species and move them to suitable alternate site.
- Acquire lands that support high quality Mohave ground squirrel habitat and pay a one-time fee to manage these lands.
- Purchase grazing leases on BLM grazing allotments with suitable habitat for the species and eliminate the grazing there.
- Restore disturbed native vegetation to create habitat suitable to the Mohave ground squirrel on public or State lands in the vicinity.

In addition, mitigation areas shall be placed under a conservation easement, deed restriction, or comparable legal instrument which restricts land uses and provides for its long-term preservation. This mitigation can be satisfied with other riparian-warranted mitigation. Furthermore, the Applicant shall coordinate with the CDFG to determine the need for an Incidental Take Permit in compliance with the State ESA.

(2) Measures to Mitigate Potentially Significant Impacts to Plant Communities

Mitigation Measure BIO-2: Prior to the issuance of any grading permit in the areas designated as red willow thicket, a mitigation and monitoring plan shall be prepared. The plan shall focus on the creation of equivalent habitats within disturbed habitat areas of the study area and/or off-site areas beyond the study area with suitable soils and hydrology. In addition, the plan shall provide details as to the implementation of the plan, maintenance, monitoring, success criteria, and long-term management. Mitigation for impacts to this sensitive plant community shall be offset by on- or off-site replacement, restoration, or enhancement of each respective sensitive plant community at a mitigation-to-impact ratio of no less than 1:1 in one or more of the following ways, which would reduce impacts to below a level of significance. The Applicant shall work with a biologist or restoration specialist experienced with planning and implementing mitigation for plant communities in California.

- Prior to disturbance activities, on- or off-site transplantation and/or seed and topsoil collection and seeding of individual plant species to a site where suitable habitat conditions exist shall be implemented.
- Seeding of sensitive plant community species.
- Planting of container plants of sensitive plant community species.
- Salvage of duff and seed bank prior to disturbance activities, and subsequent dispersal.

A 1:1 mitigation ratio for impacts to sensitive plant communities is considered to be adequate due to the disturbed condition of such communities on-site today (for example, the on-site red willow thicket contains invasive plant species as well as ornamental trees and shrubs).

(3) Measures to Mitigate Potentially Significant Impacts to "Waters of the U.S.," "Waters of the State," and Wetlands

Mitigation Measure BIO-3: Prior to the issuance of any grading permit for impacts jurisdictional features, the project applicant shall obtain a CWA Section 404 Permit from the ACOE, a CWA Section 401 Water Quality Certification from the RWQCB, and California FGC Section 1602 Streambed Alteration Agreement from the CDFG. Mitigation for impacts to ACOE, RWQCB, and CDFG jurisdictional features shall include one or more of the following measures, which would reduce impacts to below a level of significance:

- On- and/or off-site replacement of ACOE/RWQCB jurisdictional "waters of the U.S."/"waters of the State" and wetlands at a ratio no less than 1:1 mitigation to impact ratio, or as required by the agencies. Off-site replacement may include the purchase of mitigation credits at an agency-approved mitigation bank or payment into an in-lieu fee agreement.
- On- and/or off-site replacement of CDFG jurisdictional streambed and associated riparian habitat at a ratio no less than 1:1 replacement to impact ratio, or as required by CDFG. Off-site replacement may include the purchase of mitigation credits at a CDFDG-approved mitigation bank or payment into an in-lieu fee agreement.

Mitigation Measure BIO-4: Riparian and Wetland Monitoring and Adaptive Management Program

- Riparian and wetland vegetation associated with jurisdictional features regulated by the USACE, RWQCB, and/or CDFG, exist within and adjacent tothe proposed project. As suggested by the geohydrology report, this riparian and wetland vegetation is supported by the groundwater table which receives hydrologic inputs from rain and snowmelt runoff, and likely affects the shallow aquifer that contributes to surface flow from natural seeps and springs associated with geologic fracturing and fault scarps such as the Spring Line fault. It is not known what percentage of the supporting water annually comes from each of these sources. In addition, determining the amounts, by source, of supporting water and its relationship to the presence of riparian and wetland plant species, would require several years of data and installation of additional gauges, where the data ultimately collected could be difficult to interpret given seasonal variations and other factors. Therefore, the potential for impacts associated with the proposed project increase in extracting groundwater cannot be accurately determined based on available information. Due to this uncertainty, a Riparian and Wetland Monitoring and Adaptive Management Program (RWMAMP) for vegetation associated with jurisdictional areas, is proposed as mitigation.
- The RWMAMP is designed with a performance standard to respond to any significant loss of riparian and wetland vegetation and habitats within jurisdictional areas due to the increased pumping and production. The County, as lead agency for the proposed project, will be the entity responsible for ensuring the RWMAMP is implemented and annual reports are prepared. In addition, the need for responsive measures and how they will be carried out will be documented. As trustee agencies, the state and federal resource agencies, as appropriate, will be provided copies of the annual reports and related documentation concerning responsive measures for their review and comment.
- **Approach.** The methodology for monitoring is a variation of methods presented in Monitoring the Vegetation Resources in Riparian Areas (Winward 2000) . This

General Technical Report prepared by the U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, provides information on the use and application of three sampling methods to inventory and monitor the vegetation resources in jurisdictional areas. These methods are: 1) the vegetation cross-section method that evaluates the health of vegetation across a riparian corridor; 2) the greenline method that provides a measurement of the streambed associated vegetation and/or wetlands; and, 3) the woody species regeneration that measures the density and age class structure of shrub and tree species that may be in the sampling area. It should be noted that modifications made to the Winward methodology and incorporated into the RWMAMP are intended to reduce observer variability as discussed in Coles-Ritchie, et. al. (2004).

- **Assessment of Vegetation Health**. The vegetation cross-section method will consist of at least five permanently marked line-point transects aligned perpendicular to USACE, RWQCB, and CDFG jurisdiction associated with Cartago Creek and the edge of the wetland area at three (3) established monitoring stations. The transects will be placed in such a way to best represent the riparian and/or wetland communities being monitored and, to the extent practicable, will be long enough to span the observed riparian corridor and delineated wetland edge. Species composition and cover will be obtained by collecting data on species present every 0.5 meter (approximately 20 inches). Cover data will be determined by dividing the number of points where vegetation cover is observed by the total number of points on thetransect. Composition data will be determined by dividing the number of points where a particular plant species is observed by the total number of points where vegetation cover is observed on the transect. Photographs will also be taken in the direction of the transect from the start and end points.
- **Measurement of Riparian and Wetland Vegetation**. The greenline method will be used to provide an indication of the immediate riparian and wetland edge vegetation composition associated with jurisdictional areas. The greenline itself will be identified by the edge of riparian and wetland vegetation. As such, the greenline method is designed to account for a continuous line of vegetation along the wetland edge and on each side of Cartago Creek (excepting road and trail crossings) even when this line of vegetation occurs several feet above or away from the stream's edge (usually the ordinary high water mark). The greenline transect will begin at the crossing of the most "uphill" cross-section transect, on the right side (looking downstream) of Cartago Creek and the most "uphill" cross-section transect across the wetland edge. Using the step transect method, the monitor will proceed downstream a minimum of 100 meters (approximately 328 feet and considered to be the minimum distance needed to encompass the potential variation within a riparian complex), cross Cartago Creek, and walk upstream on the opposite side of the creek until opposite the starting point. In the case of the wetland edge, the transect will follow the edge in one direction only. Data on riparian and wetland plant species (obligate and facultative hydrophytes) canopy and understory will be collected every four (4) steps (approximately 8 feet). Percent cover and species composition will be calculated as described above for the cross-section method.
- **Measurement of Woody Riparian Species Regeneration**. Woody species regeneration will be measured by using the same transects used for greenline measurements. At each data collection step for the greenline method, the observer will use a 1-meter stick to collect data on woody vegetation within a circle having a radius of one (1) meter from the toe-point of the step. All woody plants rooted within the circle will be tallied based on age-class categories (sprout, young, mature,

decadent and dead, as defined by Winward (2000). Data will be analyzed for age class distribution and species composition as described above.

- **Monitoring Stations and Monitoring Regime**. To best elucidate the relationship between the increased pumping and the maintenance, health and vigor of riparian and wetland vegetation, as well as the role of rain, snowmelt runoff, and/or inputs from several natural seeps and springs along its length, and natural accretion in supporting riparian and wetland vegetation in the area, three monitoring stations will be established: 1) just upstream from the point where Cartago Creek's bed and bank characteristics are lost due to sheet flow; and 2) at a two locations where existing natural springs exist that can be monitored along one or more of the five transects established at each monitoring station near the proposed plant facility, 3) at a location removed from the proposed plant facility. The measurement of baseline, or starting conditions, following the methods outlined above, will be conducted in mid- to late August (corresponding to the arid and most stressful conditions for riparian and wetland plant species in the beginning year of the RWMAMP. Monitoring at these stations, following the methods outlined above, will take place in mid to late August during each following year of monitoring. Monitoring will be conducted annually for the first three (3) years in order to discern the potential loss of riparian wetland vegetation in the area, and implement responsive measures if necessary, as set forth below. Following year three (3) of monitoring, if no loss of riparian and wetland communities is detected due to the increased pumping, monitoring will take place at year six (6) following the onset of increased pumping. If, at the end of the entire 6-year monitoring program no significant loss of riparian and wetland communities is detected, the monitoring program will be terminated.

- **Assessment of Monitoring Data**. The effects of increased pumping, if any, will be assessed through examination of the various data collected during monitoring and the identification of trends regarding the stability of the riparian and wetland communities being monitored. First, the percent cover of obligate and facultative hydrophytes obtained through application of the vegetation cross-section method will be analyzed. Should the percent cover of these plant species exhibit a decreasing trend and/or decrease on a cumulative basis by more than 20 percent of their baseline values at any time during the monitoring program, responsive measures will be implemented as presented below. Second, should the percent cover along the greenline exhibit a decreasing trend and/or decrease on a cumulative basis by more than 20 percent of their baseline values at any time during the monitoring program, responsive measures will be implemented as set out below. Third, should the woody recruitment data exhibit a decreasing trend in young (>3 years old) or mature riparian woody plants and/or decrease on a cumulative basis by more than 20 percent of their baseline values, again, adaptive management measures will be implemented as set out below. Assessment of all three data sets will be used to determine the need and type of adaptive management measures to be implemented. It should also be noted, however, that in its analysis, the monitoring program will assess any losses stipulated above against the amount of snow- melt runoff and rainfall in that year. That is, during dry years, the health and vigor of hydrophytic plants may decrease independent of the increased pumping. Conversely, hydrophytes may flourish during wet years. In both cases, consideration will be made for climatic conditions when examining community and population trends.

- **Adaptive Management Measures**. The adaptive management strategy for identified degradation and/or loss of riparian and wetland communities within jurisdictional areas shall include creation, restoration and/or enhancement of riparian and/or

wetland habitat. The adaptive management shall be accomplished in one or more of the following ways: a) creation, restoration and/or enhancement of habitat on property owned by Crystal Geyser; b) creation, restoration and/or enhancement outside the property, but within lower Owens River Basin; and c) payment of in lieu fees to an existing riparian or wetland mitigation/conservation bank and/or existing management and/or enhancement program in the Eastern Sierra region. The selection of a site or program to which adaptive management measures will be applied will set a priority for locations where the highest benefit to habitat can be realized. The payment of in lieu fees, if such a program exists, will fulfill theserequirements, in part or in full. For adaptive management entailing habitat creation, restoration and/or enhancement, a Habitat Management and Monitoring Plan shall be prepared for review and approval by the County and trustee agencies, as appropriate. The plan will stipulate success criteria for the habitat being created, restored and/or enhanced and will be monitored by a qualified restoration ecologist for five years or until such time as the success criteria are met, but no sooner than one year following cessation of all inputs (e.g., soil amendments, irrigation, etc.) to the creation, restoration and/or enhancement project. The success criteria will address requirements for no significant net loss of riparian and/or wetland habitat regulated by the USACE, RWQCB, and/or CDFG and will focus on habitat replacement to the extent practicable and satisfactory to the participating trustee resource agencies.

- **Reporting Procedures**. Annual reports and data records will be submitted by the monitor to the County at the end of each year of monitoring. Following the submittal and depending on the need for adaptive management responses or remedial action, the County may elect to consult with trustee agencies.

(4) Measures to Mitigate Potentially Significant Impacts to Nesting Birds

Mitigation Measure BIO-5: The Applicant shall be responsible for implementing mitigation to reduce potential impacts to migratory raptor and songbird species to below a level of significance by the following: (1) Vegetation removal activities shall be scheduled outside the nesting season for raptor and songbird species (typically September 1 to February 14) to avoid potential impacts to nesting species (this will ensure that no active nests will be disturbed and that habitat removal could proceed rapidly); and/or (2) Any construction activities that occur during the raptor and songbird nesting season (typically February 15 to August 31) shall require that all suitable habitat be thoroughly surveyed for the presence of nesting raptor and songbird species by a qualified biologist before commencement of clearing. If any active nests are detected, a buffer of at least 300 feet (500 feet for raptors) shall be delineated, flagged, and avoided until the nesting cycle is complete as determined by the qualified biologist to minimize impacts.

4. CUMULATIVE IMPACTS

Cumulative impacts are defined as the reasonably foreseeable direct and indirect effects of a proposed project which, when considered alone, would not be deemed a significant impact, but when considered in addition to the impacts of related projects in the area, would be considered "cumulatively considerable" and significant. Pursuant to CEQA, impacts that are unlikely to occur are considered and/or are speculative, are not reasonably foreseeable; and, are not included in this analysis. "Related projects" refers to past, present, and probable future projects, which would have impacts similar to those of the proposed project, which are identified either through a list of projects prepared by the lead agency within and outside of its jurisdiction, and/or are based upon a summary of projections contained in an adopted general plan or related planning

document or a prior-certified EIR which describes or evaluates regional or area-wide conditions contributing to the cumulative impact. [14 California Code of Regulations Section 15130(b)(1)(B)].

For the purpose of analyzing cumulative impacts of the proposed project, several criteria were used to establish the scope of the assessment. First, for impacts related to sensitive plant communities, sensitive wildlife species, and wildlife movement corridors, the geographic extent was established to encompass the open space within the Owens Basin. This region is located in the east central portion of the State on the eastern side of the Sierra Nevada. This region is a north-south oriented basin encompassing approximately 3,050 square miles of a diverse ecological province and a regional complex of relevant habitats, species' populations, and biological systems bounded on the west and east by high mountain elevations, on the south by elevation Mojave Desert elevations, and on the north by the limits of the Owens Valley and Long Valley watersheds. This area is thought to provide a meaningful, regional ecological and biological unit upon which to base the cumulative impact analysis.

Second, the assessment considered past, present, and reasonably foreseeable projects within the next ten to fifteen years, including federal, non-federal, and private actions to the extent that information was available and deemed to be reliable and accurate. In order to accomplish this, specific and general plans for the County and cities within the relevant geographic region were reviewed and relevant information was obtained from Inyo County planning department staff.

Third, potentially affected resources were categorized and addressed in accordance with their status and sensitivity (i.e., scarcity), significance (i.e., importance to habitat functions and values), and role in ecosystem sustainability (i.e., contribution to biological diversity). In this manner, all resources potentially affected are considered; however, focus is placed on those resources upon which cumulative impacts potentially have the greatest cause-and-effect implications.

Fourth and finally, the analysis considers cumulative impacts to be additive, as well as potentially synergistic in their effects. Thus, the concept of thresholds for impacts, beyond which resource functions and values are lost despite the persistence of resources in limited amounts, is taken into consideration.

Six related projects have been identified in the cumulative impacts study area and are summarized below.

- Caltrans' proposed widening and realignment of US 395 from a two-lane conventional highway to a four-lane expressway that would begin south of Olancha to the previously constructed Ash Creek Four Lane Project.
- Rio Tinto Trona mining expansion within Owens Lake.
- Dirty Socks Duck Club expansion north of Cartago.
- LADWP's "Owens Lake Dust Mitigation Plan" that has been implemented in conjunction with the Great Basin Air Pollution Control District to reduce fugitive dust generated by wind blowing across the dry lakebed by best available control measures, including shallow flooding and managed native vegetation. To date approximately 19 acres are being treated with approximately 11 more acres to be treated in the near future.

- LADWP's Southern Owens Valley Solar Ranch Project anticipated to start construction in July 2012. The project will affect approximately 3,100 acres at one of two alternate sites located between US 395 and the Owens River near the Boulder Creek RV Resort and between the Owens River and Owenyo Lone Pine Road north of Lone Pine, respectively.
- LADWP's Lower Owens River Project (LORP) that has been implemented and is on-going. The LORP is mitigation for certain water gathering activities by LADWP from 1970 to 1990. Components of the project are: (1) the restoration of aquatic and riparian habitats within and along 62 river miles of the lower Owens River; (2) the enhancement and maintenance of approximately 325 acres of existing habitat within the designated Owens River Delta Habitat Area for shorebirds, waterfowl, and other animals, and to establish and maintain at least approximately 315 acres of new riparian habitats and ponds; (3) the maintenance of existing habitat within the four unit Blackrock Waterfowl Habitat Area potentially including the flooding of approximately 1,342 acres to support the establishment of resident and migratory waterfowl populations, and to provide habitat for other species; and (4) the maintenance and/or establishment of off-river lakes and ponds, including Twin Lakes (Upper and Lower), Goose Lake, Billy Lake, and Thibaut Ponds, in order to sustain diverse habitat for fisheries, shorebirds and other animals. The LORP also includes protection measures for two State and federally-listed species of fish (Owens pupfish and Owens tui chub), four State and federally-listed species of birds (yellow-billed cuckoo, willow flycatcher, southwestern willow flycatcher, and American peregrine falcon), and one State endangered plant species (Owens Valley checkerbloom).

Implementation of the proposed project would result in the direct removal of numerous common plant species within the project area. Common plant species present within the study area occur in large numbers throughout the region and their removal, in addition to their removal as a result of related projects will not be cumulatively considerable. Many of the sensitive plant species discussed in Section 1b(3), Sensitive Plant Species, may occur within the region, but are not expected to occur within the project area due to the lack of suitable habitat or because the study area is outside of the known geographical range or elevational range for these species. However, environmental conditions in which several of the sensitive plant species have been known to occur have similarities with those of the project area, including Tulare rockcress, upswept moonwort, scalloped moonwort, mingan moonwort, Kern Plateau bird's beak, sanicle cymopterus, Kern River fleabane, field ivesia, creamy blazing star, Charlotte's phacelia, Parish's popcorn-flower, Bailey's greasewood, Owen's Valley checkerbloom, cut-leaf checkerbloom, marsh arrow-grass, and grey-leaved violet. As described above, Mitigation Measure 4.A-1a shall be implemented to avoid, minimize, or compensate for impacts to these species. Therefore, the proposed project will not result in a contribution to this impact that will be cumulatively considerable.

Several special status fish and wildlife species are known to occur within the cumulative impacts study area but are not expected to occur on-site due to lack of suitable habitat or because the project area is outside of the known elevational range or geographical range for the species. Sensitive fish and wildlife species that may have some potential to occur due to the presence of suitable habitat on-site include Owen's tui chub, Owen's pupfish, Owens speckled dace, Swainson's hawk, loggerhead shrike, yellow breasted chat, yellow warbler, least bittern, least Bell's vireo, spotted bat, Owen's Valley vole, and Mohave ground squirrel. Loggerhead shrike, yellow breasted chat, least bittern, spotted bat, and Owen's Valley vole are California Species of Special Concern, but are not federal- or State-listed species. Implementation of the proposed project will impact habitat which may potentially be used by loggerhead shrike and spotted bat (for foraging only as spotted bat is not expected to roost on-site); however, if these SSC species are present within the study area, any loss of individuals from implementation of the proposed project in a cumulative impact

context would not threaten regional populations due to the large areas of habitat surrounding the study area that will be available for these species to utilize.

If large populations of the yellow breasted chat are found on-site, impacts would be potentially significant, and the mitigation discussed above under Mitigation Measure 4.A-1b shall apply. The same holds true for the presence of least Bell's vireo. In addition, LADWP's LORP will increase and maintain riparian habitats within the lower Owens River reach, thereby increasing the amount of suitable habitat for these species in the cumulative impacts study area well over that which exists today. Therefore, the project's contribution to cumulative loss of habitat for these species will not be cumulatively considerable in the context of baseline conditions.

Due to the degraded nature of the habitat on-site, and the presence of other ponds and available water sources found immediately adjacent to the study area which provides higher quality habitat to support the least bittern, cumulative impacts to this species would be considered di minimis and not cumulatively considerable.

Regarding the Owens Valley vole, the amount of suitable habitat within the study area is very small in comparison to the extensive marsh habitats in the vicinity of the project and habitat loss would not contribute measurably to a cumulative impact.

The Owen's tui chub, Owens pupfish and Owens speckled dace may potentially occur in the ephemeral Cartago Creek, and irrigation ditches within the project area. If any of these species of fish are found in the project area during prescribed surveys prior to commencement of construction, Mitigation Measure 4.A-1b shall apply. In addition, LADWP's LORP will increase and maintain aquatic and riparian habitats within the lower Owens River reach, thereby increasing the amount of suitable habitat for these species in the cumulative impacts study area well over that which exists today. Therefore, the project's contribution to cumulative loss of habitat for these species will not be cumulatively considerable.

Should the Swainson's hawk be found on-site or in the vicinity of the project, Mitigation Measure 4.A-1b would be required. With implementation of this measure, this impact would not represent a cumulatively considerable contribution to cumulatively significant impacts.

Should the Mohave ground squirrel be found on-site, Mitigation Measure 4.A-1b would be required. With implementation of the conditions of this measure, this impact would not represent a cumulatively considerable contribution to cumulatively significant impacts.

A total of 4.20 acres of red willow thicket (a sensitive natural community) is present on the project site, of which 2.88 acres would be directlu impacted by the proposed project. Although this loss is not inconsequential itself and warrants the implementation of Mitigation Measure 4A-b above, LADWP's LORP is intended to establish and maintain many times the acreage to be lost as a result of the project. Therefore, the project-related loss of red willow thicket would not represent a cumulatively considerable contribution to cumulatively significant impacts.

Implementation of the proposed project will directly impact 0.04 acres of ACOE/RWQCB jurisdictional non-wetland "waters of the U.S." and 0.16 acres of CDFG jurisdictional streambed and associated riparian habitat.

In addition to the implementation of Mitigation Measure 4.A-3, which requires replacement at a 1:1 ratio, the implementation of LADWP's LORP which will establish and/or maintain approximately 650 acres of aquatic and riparian habitat (i.e., waters of the U.S. and CDFG jurisdictional streambed and associated riparian habitat) and aquatic and riparian habitats within and along 62 river miles of the Owens River. In this context the loss of 0.16 acre of regulated waters and riparian habitat and their replacement of like waters and habitats at a 1:1 ratio would not represent a cumulatively considerable contribution to cumulatively significant impacts.

No corridors described in the California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California (Spencer, W.D., et al. 2010) occur within the study area and contributions to cumulative impacts in this regard are not expected.

There are no inconsistencies with County of Inyo local polices and ordinances that would contribute to cumulative impacts in this regard.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The required mitigation measures will reduce all potentially significant impacts to sensitive plant species, sensitive wildlife species, sensitive plant communities, jurisdictional features, and nesting birds to a less than significant level.

4.0 ENVIRONMENTAL IMPACT ANALYSIS
D. ARCHAEOLOGICAL/PALEONTOLOGICAL RESOURCES

INTRODUCTION

This section evaluates potential impacts on archaeological and paleontological resources that could occur with implementation of the proposed project. The analyses and recommendations are based on a technical report prepared by PCR titled, *Phase I and II Archaeological and Paleontological Resources Assessment of the Proposed Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility; Inyo County, California* by Garcia (2012). The technical report is included in **Appendix D** of this Draft EIR.

Archaeology is the recovery and study of material evidence of human life and culture of past ages. Over time, this material evidence becomes buried, fragmented or scattered or otherwise hidden from view. It is not always evident from a field survey if archaeological resources exist within a project site. Thus, the possible presence of archaeological materials must often be determined based upon secondary indicators, including the presence of geographic, vegetative, and rock features which are known or thought to be associated with early human life and culture, as well as knowledge of events or material evidence in the surrounding area. Archaeological resources may include both prehistoric remains and remains dating to the historical period. Prehistoric (or Native American) archaeological resources are physical properties resulting from human activities that predate written records and are generally identified as isolated finds or sites. Prehistoric resources can include village sites, temporary camps, lithic (stone tool) scatters, rock art, roasting pits/hearths, milling features, rock features, and burials. Historic archaeological resources can include refuse heaps, bottle dumps, ceramic scatters, privies, foundations, and burials and are generally associated in California with the Spanish Mission Period to the mid-20th century of the American Period.

Paleontology is a branch of geology that studies the life forms of the past, especially prehistoric life forms, through the study of plant and animal fossils. Paleontological resources represent a limited, non-renewable, and impact-sensitive scientific and educational resource. As defined in this section, paleontological resources are the fossilized remains or traces of multi-cellular invertebrate and vertebrate animals and multi-cellular plants, including their imprints from a previous geologic period. Fossil remains such as bones, teeth, shells, and leaves are found in the geologic deposits (rock formations) where they were originally buried. Paleontological resources include not only the actual fossil remains, but also the collecting localities, and the geologic formations containing those localities.

1. ENVIRONMENTAL SETTING

a. Regulatory Framework

Numerous laws and regulations require federal, state, and local agencies to consider the effects of a proposed project on cultural resources. These laws and regulations establish a process for compliance, define the responsibilities of the various agencies proposing the action, and prescribe the relationship among other involved agencies (e.g., State Historic Preservation Office and the Advisory Council on Historic Preservation). The National Historic Preservation Act (NHPA) of 1966, as amended; CEQA; the California Register of Historical Resources (California Register); and California Public Resources Code (PRC) 5024, are the primary

federal and state laws governing and affecting preservation of historic resources of national, state, regional, and local significance. Other relevant regulations at the local level include the County's General Plan. A description of the applicable laws and regulations is provided in the following paragraphs.

(1) Federal

(a) Archaeological Resources

Section 106 of the National Historic Preservation Act

The regulations implementing Section 106 of the National Historic Preservation Act of 1966 (Section 106, NHPA), as amended, requires that the lead federal agency with jurisdiction over a federal undertaking must consider adverse effects to historic properties before that undertaking occurs. Compliance with Section 106 requires a sequence of steps, often referred to as the "Section 106 process." The steps include (1) identification of the area that will be affected by the proposed undertaking ("area of potential effect" [APE]); (2) identification of historic or archaeological resources; (3) evaluation of the eligibility of the resources for listing on the National Register of Historic Places; (4) determination of the level of effect of the undertaking on eligible properties; and (5) consultation with concerned parties and agreement in the form of a Memoranda of Agreement (MOA) on avoidance, minimization, or mitigation of adverse effects on eligible properties. These steps are described in more detail below.

Evaluation of archaeological and historical property significance follows the significance criteria of the National Register of Historic Places (National Register). The National Register was established by the NHPA in 1966 to serve as "an authoritative guide to be used by Federal, State, and local governments, private groups and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment." (36 CFR § 60.2). The National Register recognizes properties that are significant at the national, state and local levels. Guidelines for nomination require that significant resources exhibit aspects of important themes in American history, architecture, archaeology, engineering, and culture and possess integrity of location, design, setting, materials, workmanship, feeling, and association and that:

a. Are associated with events that have made a significant contribution to the broad patterns of our history; or

b. Are associated with the lives of persons significant in our past; or

c. Embody the distinctive characteristics of a type, period, or method of construction, or that possess high artistic values, or that represent a significant distinguishable entity whose components may lack individual distinction; or

d. Have yielded, or may be likely to yield, information important to history or prehistory

If compliance with Section 106 is triggered, the criteria for eligibility to the National Register provide the basis for evaluation and subsequent management of cultural resources in the project site.

In addition to meeting the Criteria for Evaluation, a property must have integrity. "Integrity is the ability of a property to convey its significance."[1] According to *National Register Bulletin 15 (NRB)*, the National Register recognizes seven aspects or qualities that, in various combinations, define integrity: location, design, setting, materials, workmanship, feeling, and association. In assessing a property's integrity, the National Register criteria recognize that properties change over time, therefore, it is not necessary for a property to retain all its historic physical features or characteristics. The property must, however, retain the essential physical features that enable it to convey its historic identity.[2]

Archaeological resources, in contrast to historical resources, are most often eligible under Criterion D (or Criterion 4 of the California Register) for their "information potential." For properties eligible under Criterion D, less attention is given to their overall condition, than if they were being considered under Criteria A, B, or C. Archeological sites, in particular, do not exist today exactly as they were formed as there are always cultural and natural processes that alter the deposited materials and their spatial relationships. For properties eligible under Criterion D, integrity is based upon the property's potential to yield specific data that addresses important research questions.[3]

(b) Paleontological Resources

Federal protection for significant paleontological resources would apply to the project if any construction or other related project impacts occurred on federal owned or managed lands. Because the project site is on privately owned land, this federal statute is not applicable.

(2) State Level

(a) Archaeological Resources

California Register of Historical Resources

Created by Assembly Bill 2881, which was signed into law on September 27, 1992, the California Register of Historical Resources (California Register) is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change."[4] The criteria for eligibility for the California Register are based upon National Register criteria.[5] Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.[6]

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1 *National Register Bulletin 15, p. 44.*

2 *"A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer. Like feeling, association requires the presence of physical features that convey a property's historic character. Because feeling and association depend on individual perceptions, their retention alone is never sufficient to support eligibility of a property for the National Register." Ibid, 15, p. 46.*

3 *National Register Bulletin 15, p. 46.*

4 *California Public Resources Code Section 5024.1(a).*

5 *California Public Resources Code Section 5024.1(b).*

6 *California Public Resources Code Section 5024.1(d).*

To be eligible for the California Register, a pre-historic or historic property must be significant at the local, state, and/or federal level under one or more of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

2. Is associated with the lives of persons important in our past;

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must meet one of the criteria of significance described above and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects occurring in the State. CEQA requires lead agencies to determine if a proposed project would have a significant effect on archaeological resources (Public Resources Code Sections 21000 et seq.). As defined in Section 21083.2 of the Public Resources Code a "unique" archaeological resource is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, and there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

In addition, CEQA Section 15064.5 broadens the approach of classifying archaeological resources by using the term "historical resource" instead of "unique archaeological resource." The CEQA Guidelines recognize that certain archaeological resources may also have significance. The Guidelines recognize that a historical resource includes: (1) a resource in the California Register of Historical Resources; (2) a resource included in a local register of historical resources, as defined in Public Resources Code §5020.1 (k) or identified as significant in a historical resource survey meeting the requirements of Public Resources Code §5024.1 (g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is a historical resource, the provisions of §21084.1 of the Public Resources Code and §15064.5 of the Guidelines apply. If an archaeological site does not meet the criteria for a historical resource contained in the Guidelines, then the site is to be treated in accordance with the provisions of Public Resources Code §21083.2, which refer to a unique archaeological resource. The Guidelines note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. (Guidelines §15064.5(c)(4)).

(b) Paleontological Resources

Paleontological resources are also afforded protection by environmental legislation set forth under CEQA. Appendix G of the *CEQA Guidelines* provides guidance relative to significant impacts on paleontological resources, stating that "a project will normally result in a significant impact on the environment if it will …disrupt or adversely affect a paleontological resource or site or unique geologic feature, except as part of a scientific study." Section 5097.5 of the PRC specifies that any unauthorized removal of paleontological remains is a misdemeanor. Further, the California Penal Code Section 622.5 sets the penalties for damage or removal of paleontological resources.

(3) Local Level – County of Inyo

(a) Archaeological Resources

The Conservation/Open Space Element (Element) of the County's General Plan (adopted 2001) states goals, policies, and implementation programs for the identification and protection of cultural resources within the County. These are listed below:

Goal Cul-1: Preserve and promote the historic and prehistoric cultural heritage of the County

- *Policy CUL-1.1: Partnerships in Cultural Programs* – Encourage and promote private programs and public/private partnership that express the cultural heritage of the area.
- *Policy CUL-1.2: Interpretive Opportunities* – Support and promote the development of interpretive facilities, such as roadside kiosks, museums, and restored historic buildings that highlight the County's cultural resources.
- *Policy CUL-1.3: Protection of Cultural Resources* - Preserve and protect key resources that have contributed to the social, political, and economic history and prehistory of the area, unless overriding circumstances are warranted.
- *Policy CUL-1.4: Regulatory Compliance* - Development and/or demolition proposals shall be reviewed in accordance with the requirements of CEQA and the National Historic Preservation Act.
- *Policy CUL-1.5: Native American Consultation* - The County and private organizations shall work with appropriate Native American groups when potential Native American resources could be affected by development proposals.

Implementation Measures:

1. The County shall work in partnerships with private entities, other agencies, and educational institutions to support dissemination of knowledge of the historic and prehistoric past of the County. This may include acquisition of funding, promotion of festivals, and/or development of interpretive facilities.

2. The County should maintain and update the existing survey of historic structures (prepared by IMACA). This document should identify key resources that should be the focus for preservation.

3. If preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservations of facades, and thorough documentation and archival of records,

4. Native American groups shall be contacted at the preliminary stages of a project that may result in effects to Native American resources.

(b) Paleontological Resources

The County's General Plan does not specifically address paleontological resource goals, objectives, or policies.

b. Existing Conditions

(1) Resources Identified within the Project Site

(a) Archaeological and Paleontological Resources

(i) Methods

PCR conducted phase I and II cultural resource assessments of the project site to determine the potential impacts to archaeological and paleontological resources for the purpose of complying with CEQA and the County's General Plan. The scope of work for the phase I assessment included a cultural resources records search through the California Historical Resources System-Eastern Information Center (CHRIS-EIC), a Sacred Lands File (SLF) search through the California Native American Heritage Commission (NAHC) and follow-up Native American consultation, a paleontological resources records search through the Natural History Museum of Los Angeles County (NHMLAC), and a pedestrian survey of the project site. The scope of work for the phase II assessment included additional background research, a subsurface testing program, artifact processing, an evaluation of known resources regarding their eligibility for listing in the California Register of Historical Resources and whether they qualify as "unique archaeological resources," impact evaluations, and the recommendation of mitigation measures to reduce potentially significant impacts to resources to a less than significant level. The detailed methodology and results of these tasks are provided below.

Cultural Resources Records Search

On September 28, 2011, PCR archaeologists conducted an in-house cultural resource records search at the CHRIS-EIC in Riverside, California. This records search included a review of all recorded historical resources and archaeological sites within a half-mile radius of the project site as well as a review of cultural resource reports and historic topographic maps on file. In addition, PCR reviewed the California Points of Historical Interest (CPHI), the California Historical Landmarks (CHL), the California Register, the National Register, and the California State Historic Resources Inventory (HRI) listings. The purpose of the record search is to determine whether or not there are previously recorded archaeological or historical resources within the

Study Area that require inclusion in the current analysis. The results also provide a basis for assessing the sensitivity of the Study Area for additional and buried cultural resources.

Paleontological Resources Records Search

On May 13, 2011, PCR commissioned a paleontological records search through the NHMLAC in Los Angeles, California. This institution maintains files of regional paleontological site records as well as supporting maps and documents. These record searches entailed an examination of current geologic maps and known fossil localities inside and within the surrounding region of the project site. Results of the record search indicate whether or not there are previously recorded paleontological resources or fossiliferous geological formations within the project site. The results also provide a basis for assessing the sensitivity of the project site for additional and buried paleontological resources.

Sacred Lands File Search and Follow-Up Native American Consultation

On May 13, 2011, PCR archaeologists commissioned a SLF records search of the project site through the NAHC. The NAHC is responsible for conducting SLF records searches to assist in the identification of Native American or prehistoric archaeological resources that may be impacted by implementing proposed projects. On October 14, 2011, each Native American group and/or individual listed (n=11) in the NAHC's Native American contact list for the project was sent a project notification letter and map and was asked to convey any knowledge regarding prehistoric or Native American resources (archaeological sites, sacred lands, or artifacts) located within the project site or surrounding vicinity. The letter included information such as project site location and a brief description of the proposed project. Results of the SLF search and follow-up consultation provide information pertaining to the nature and location of additional prehistoric or Native American resources to be incorporated in the assessment whose records may not be available at the CHRIS-EIC.

Pedestrian Survey

On October 20, 2011, PCR conducted a pedestrian survey of the portion of the project site that would be subject to ground disturbance plus adjacent areas totaling approximately 27 acres, using transects intervals totaling 10 to 15 meters. The ground surface within the project site was examined for the presence of archaeological and paleontological resources. PCR surveyed 100 percent of the project site.

Archaeological Testing and Evaluation

In February 2012, PCR manually excavated 38 Shovel Test Probes (STPs) within the boundaries of the newly identified resource, CBR-S-2, and the immediate vicinity. The locations of the STPs were chosen by PCR near surface artifact concentrations (for their high potential to retain buried artifacts) and throughout the resource to acquire information as to the nature of the subsurface components of the resource. The STPs were excavated by hand (with a shovel) as 30-by-30-cm-diameter units with 20-cm level intervals. The STPs were excavated to depths of 60 cm to determine the presence or absence of intact buried cultural deposits (including whether additional artifact types or features other than chipped stone are present) and to evaluate the resource and to evaluate the resource pursuant to CEQA.

(ii) Results

Cultural Resources Records Search

Results of the cultural resources records search revealed that five cultural resources studies have been conducted within the project site and more than 20 studies have been conducted within the half-mile radius. Four of the five studies include cultural resources investigations to support the CalTrans Olancha/Cartago Four-Lane project along U.S. Route 395. One of these studies include a phase I cultural resources assessment of the entire Cabin Bar Ranch property that was conducted in 1989 (see Dillon et al. 1989). Taken collectively, all of the studies address 100 percent of the project site and approximately 75 percent of the half-mile radius and demonstrate that the project site and surrounding vicinity have undergone previous cultural resources investigations. Although not available at the CHRIS-EIC, PCR obtained an archaeological resources assessment report from the Applicant that included an archaeological survey of portions of the current project site and for portions immediately outside the project site (see Johnson 2010). Johnson (2010) identified two archaeological resources, CBR-S-1/H and CBR-S-2, immediately outside and within the project site, respectively, as part of her study. These resources are described in detail, below:

CBR-S-1/H

This resource was recorded by Johnson in 2010 and is described as a protohistoric archaeological site that measures approximately 80 m by 80 m in size and has potential to contain a subsurface archaeological deposit, based on the presence of artifacts in animal burrows. It is located approximately 200 m west of the area where the proposed bottling facility is to be constructed and 100 m northwest of the proposed access road alignment; therefore, CBR-S-1/H is located outside of the project site. The surface component of the resource consists of 89 brownware pottery sherds, five beads (two steatite, two shell or magnesite, one probable magnesite), two obsidian Desert series projectile points (one Desert Site-notched, one Cottonwood), one obsidian drill, seven obsidian bifaces, three obsidian unifacial simple flake tools, two milling slabs, one granite handstone, one chert pebble tool, eight pieces of fire-affected rock, and approximately 80 pieces of debitage (i.e., waste material generated during the production of chipped stone tools). Historic-period artifacts include one pendant made from the rim fragment of a porcelain cup and one unmodified fragment of a thin porcelain cup or bowl. Fifteen faunal specimens, including many that are burnt or calcined, were also identified within the resource (Johnson 2010).

An additional 102 artifacts were identified on the surface in "isolated contexts" just outside CBR-S-1/H that were mapped in place and then removed by Johnson to a location within the site boundary of CBR-S-1/H per the request of Sandra Yonge of the Lone Pine Paiute-Shoshone tribe. Ms. Yonge recommended the artifacts to be moved because she suggested that they may have originated from CBR-S-1/H and were subsequently displaced by rodent and other ground-disturbing activities. The artifacts that were moved include Owens Valley brownware sherds, obsidian tools, an obsidian projectile point blank, obsidian debitage (n=60), obsidian bifaces, ground stone artifacts, ironstone china fragments, a blue glass trade bead, window glass, and several glass bottle fragments (aqua, amethyst, and frosted) (Ibid).

Johnson (2010) suggests the resource likely dates to the Protohistoric Period due to the presence of the historic-period pendant made from the rim fragment of a porcelain cup. The presence of beads and other items made of non-local materials suggest the inhabitants may have engaged in trade with groups from the California coast. Per the request of the Ms. Yonge, the Applicant has since covered a 50 m by 40 m area of the resource with the highest artifact density with fill soils to ensure its protection from looting (Ibid).

CBR-S-2

This resource was also recorded by Johnson in 2010 and was originally described as 25 isolated prehistoric and historic artifacts[7] that were identified on the surface within a 180 m by 100 m area. The resource is located within the project site where the proposed bottling facility is to be constructed. The artifacts include one obsidian Desert Side-notched point, an obsidian biface, 17 pieces of obsidian debitage, and six glass bottle fragments (amethyst, olive green, and cobalt blue) (Johnson 2010). The Desert Side-notched projectile point is characteristic of the Late Prehistoric Period (800 YBP to Contact).

Other Previously Recorded Resources near the Project Site

According to records from the CHRIS-EIC, more than 60 cultural resources have been previously recorded within a half-mile radius of the project site. These resources include built environment resources (i.e., the Los Angeles Aqueduct, historic-period buildings, railroads, etc.), prehistoric archaeological resources (i.e., artifact scatters, bedrock milling stations, burials, rock features, and isolated artifacts), and historic archaeological resources (i.e., historic refuse dumps and scatters, structure foundations, and other historic-period ruins). One of these archaeological resources, CA-INY-43/H (P-14-000043), is located within Cabin Bar Ranch but outside of the project site and is worth mentioning as part of the current analysis given its likely association with both CBR-S-1/H and CBR-S-2. It is described in detail below:

CA-INY-43/H (P-14-000043)

This resource was originally recorded by Harry Riddell in 1949 and was later revisited by Arnold Pilling and Adan Treganza in 1950. In 1989, Dillon conducted the most thorough recordation of the resource as part of his cultural resources assessment of the Cabin Bar Ranch property (see Dillon et al. 1989). It is located on the west side of U.S. Route 395 and is therefore outside of the current project site. Some of the resource is located within the Cabin Bar Ranch property while the majority is located on land managed by the U.S. Bureau of Land Management (BLM). The resource measures approximately 500 m by 450 m and consists of multiple granitic bedrock milling stations, patches of midden soil, late prehistoric period projectile points (Desert Side-notched), other diagnostic projectile points dating to earlier periods (Humbolt Basal-notched, Pinto, and Elko Eared), Owens Valley brownware pottery, obsidian debitage (obsidian samples sourced to Coso Volcanic field, 25 miles south of the project site), some chert and andesite debitage, and glass trade beads (Dillon 1991).

Late projectile points, Owens Valley brownware, and bedrock mortars suggest the surficial components of the resource date to the Late Prehistoric Period (800 YBP to Contact); however, other projectile points dating to earlier periods were also identified in the more northern area of the resource (Pinto Period – 7,000 to 4,000 YBP; Elko Period – 4,000 to 1,500 YBP; see Chapter 4). Dillon (1991) suggests the resource was occupied during the Protohistoric Period (1830-1865) as Owens Lake was an area where several armed confrontations between early European/American settlers and local Paiute and Shoshone Native Americans (see Dillon et al. 1989 for discussion of these protohistoric and historic period events). Dillon suggests the resource was occupied as a seasonal village by the Owens Valley Paiute or Koso Shoshone and that the bedrock milling stations (that include slicks and mortars) are indicative of habitation and female-oriented food processing activities. It is likely that the prehistoric inhabitants were attracted to the area by the

[7] *PCR classifies CBR-S-2 as an archaeological site.*

proximity to the lake margin and the fresh water sources (i.e., Cartago Creek and the Cabin Bar Ranch springs) and he explains that the Cottonwood Creek Site (CA-INY-2), located six miles to the north, has the only other equally favorable natural conditions in the region (Dillon 1991).

The resource was abandoned by the Native Americans in the late 1860s after early ranchers established a presence at the mouth of Cartago Creek which was the northern terminus for the mule- and ox-driven wagons hauling ore from the Cerro Gordo mines to Los Angeles (Dillon 1991). This presence also included the construction of the Cartago Boat Landing (P-14-005197) in 1872 at the mouth of Cartago Creek where the famed Bessie Brady steamboat would unload ore from the mines to be transported to Los Angeles. Remnants of the rock wharf likely associated with Cartago Boat Landing were identified by PCR during the pedestrian survey in the form of a 20-m linear rock alignment. The rock alignment is currently outside of the current Study Area (approximately 80 m southeast of the nearest construction activity) but within the Cabin Bar Ranch property.

As part of the CalTrans Olancha/Cartago Four-Lane project along U.S. Route 395, Shelly Davis-King and Johnson interviewed Terald Goodwin – a member of the Lone Pine Paiute Shoshone Indian Reservation. According to Mr. Goodwin, his great-great-grandmother, *Wo-wo-ni-di-gee,* lived at CA-INY-43/H for some time and a particular bedrock milling station at the resource was utilized traditionally by her. Mr. Goodwin has old photographs of *Wo-wo-ni-di-gee* near the mule sheds at Cartago, including one photograph that shows her in her shelter near a corral, and another showing her near her "brush pile." The mules were used in the hauling of supplies and ore from the mines (Davis-King 2003).

With a National Register Status Code of "2S2,"CA-INY-43/H is an individual property that was determined eligible for listing in the National Register by a consensus through the Section 106 process and is also listed in the California Register. It was evaluated for listing by the BLM in 1992.

P-14-005197 - Cartago Boat Landing

The Cartago Boat Landing (CHPI-INY-006/P-14-005197) was designated as a CPHI in 1980. According to local legend, the town of Cartago was established in June 1872 by John Baptiste Daneri, a Lone Pine businessman who constructed a warehouse, store and the landing on the southwest shore of Owens Lake to capitalize on mining across Owens Lake at the Cerro Gordo mines.[8] From this port, the silver bullion from the Cerro Gordo mines was offloaded from the Bessie Brady steamer and transferred by mule and ox-driven wagons that took the silver to Los Angeles, and later Bakersfield. According to oral history, Daneri named the area Carthage after the ancient city-state in North Africa, located on eastern side of Lake Tunis, which became one of the largest and most powerful seaports in the Mediterranean. There were two other boat landings on Owens Lake: Daniel L. Ferguson constructed Ferguson's Landing on the northwest edge of the Owens Lake; and Brady and Ferguson constructed a long wharf at the northeast shore at Swansea.[9]

In October 1872, Daneri purchased an interest in Bessie Brady and with a partner incorporated the Owens Lake Steam Navigation Company. By January 1873 the cross-lake shipment became so popular there was a backlog of 18,000 bars of bullion lining the wharf and streets of Cartago. To deal with the backlog, a new

[8] *Bill Michael, Cartago (Independence, CA: Eastern California Museum: November 1981): 1.*

[9] *Richard E. Lingenfelter, "The Desert Steamers," Journal of the West (October 1962): 149-160.*

freighting company comprised of mule teams began transporting the bullion to Los Angeles. The steamboat era on Owens Lake lasted only ten years. By 1879, the Cerro Gordo mines were beginning to decline. The Bessie Brady burned in 1882 and the Carson and Colorado Railroad was constructed, running from Keeler (near the Cerro Gordo Mines) to Moundhouse, Nevada in 1883 thereby changing all of the established freighting practices. The landing at Cartago and the steamers were no longer profitable or necessary.

By 1924, there were only traces of the wharf remaining, as most of its timbers had been salvaged for firewood by the Willie Brown family of Indians who lived among the cottonwoods between Cartago and Olancha (Pipkin 1974 in Daivs-King 2003). As discussed later in this section, remnants of the rock wharf likely associated with the Cartago Boat Landing were identified in 2011 by PCR during the pedestrian survey in the form of a 20-m linear rock alignment. The rock alignment is currently outside of the current project site (approximately 80 m southeast of the nearest construction activity) but within the Cabin Bar Ranch property.

TS-1 and TS-2

These resources were identified and recorded by Dillon in 1989 although it appears that no California Department of Parks and Recreation (DPR) Site forms were submitted to the CHRIS-EIC since the only source of information regarding these resources is found in his report from 1989 (see Dillon 1989). As a result, no formal trinomials or primary numbers have been designated for them. TS-1 is located more than 600 meters southeast of the proposed access road alignment and near the southern boundary of the Cabin Bar Ranch property; therefore, it is located outside of the project site. It is described consisting of obsidian debitage (n= circa 20) and diagnostic Elko Eared and Northern Side-notched projectile points that may have been brought to the surface by cattle grazing activities after Owens Lake dried up around 1924. TS-1 measures approximately 80 m by 80 m in size and may have been occupied during the Elko Period (4,000 to 1,500 YBP) given the presence of Elko type projectile points (Dillon 1989).

TS-2 is located more than 350 meters south of the proposed bottling plant location and 300 m east of the proposed access road location; therefore, it is located outside of the project site but within the Cabin Bar Ranch property. It is described as consisting of ground stone artifacts (manos and metates, n=6) that were buried by lakeshore deposits only to be brought to the surface by the trenching of a north-south irrigation ditch after the lake dried up. TS-2 measures approximately 15 m by 15 m in size (Ibid).

Dillon also identified more than 30 isolated prehistoric artifacts (i.e., chipped stone artifacts, pottery) in the Cabin Bar Ranch property that were predominantly located in three general areas; near the northern edge of the ranch, near the current location of CBR-S-1/H, and near the horse corrals/CBR-S-2 (Ibid). These isolated resources were not mapped in place by Dillon.

Native American Human Remains

According to records examined at the CHRIS-EIC, several Native American human remains have been encountered during past construction activities and several known Native American cemeteries are known to exist in the immediate vicinity of the project site and Cabin Bar Ranch property and in the surrounding region. Given the sensitive and confidential nature of these resources, no specific locational or descriptive information will be provided in this report.

No other resources listed in the CPHI, CHL, California Register, National Register, or HRI were identified within project site.

Conclusion

Although the current content and condition of some of these resources is currently unknown, these findings confirm the presence of past prehistoric and historic occupation within and in the immediate vicinity of the project site.

Paleontological Resources Records Search

Results of the paleontological resources records search through the NHMLAC revealed that no previously recorded vertebrate fossil localities are located within the project site or within the Cabin Bar Ranch property. The results did indicate that several localities have been recorded nearby in the same sedimentary deposits that underlie the project site. According to the NHMLAC, surficial deposits of the project site consist of younger Quaternary Alluvium which may contain Holocene- or Late Pleistocene-aged paleontological resources. The closet locality from these deposits is LACM 4538 that produced a specimen of Columbian mammoth six miles south of the project site near the North Haiwee Reservoir that was collected by William Mulholland during the construction of the Los Angeles Aqueduct. LACM 7716 – 7719 was encountered approximately 14 miles northeast of the project site on northeast shores of Owens Lake that produced specimens of bony fish, bird, jack rabbit, pocket gopher, and an even-toed ungulate. LACM 4691 was encountered on the north margin of the lake approximately 16 miles north of the project site that produced Proboscidea remains and a fossil mountain lion.

Sacred Lands File Search and Follow-Up Native American Consultation

Results of the SLF search through the NAHC did not indicate any known Native American cultural resources from the NAHC archives within the project site or the Cabin Bar Ranch property. The NAHC results also noted, however, that Native American cultural resources may be inadvertently discovered during ground-breaking activities. Pursuant to NAHC suggested procedure, follow-up letters were sent via certified mail on October 14, 2011 to the 11 Native American individuals and organizations (including Paiute and Shoshone contacts) identified by the NAHC as being affiliated with the vicinity of the project site to request any additional information or concerns they may have about Native American cultural resources that may be impacted by the proposed project. PCR has return receipts on file from 10 of the 11 Native American contacts. Mr. Joe Kennedy's letter was returned to PCR as undelivered.

As of May 3, 2012, PCR has received no direct responses to the letters from the Native American community. However, at the request of the County and the Applicant, PCR did consult with Ms. Katherine Bancroft of the Lone Pine Paiute-Shoshone Indian Reservation regarding the project prior to the implementation of the phase II testing and evaluation assessment. Ms. Bancroft approved of PCR's recommendation to conduct archaeological test excavations at CBR-S-2 and was present to monitor the excavations.

Pedestrian Survey

Ground surface visibility within the project site varied from zero to 100 percent. In particular, in the area where CBR-S-2 was identified (where the proposed bottling plant is proposed) and in the alignment for the new access road, the visibility varies from poor to good (25 to 75 percent) primarily due to vegetation cover.

The ground surface could not be seen along Cabin Bar Ranch Road since the pavement obstructed views in this area. In all other areas of the project site, the visibility varied from zero to 100 percent depending on the vegetation cover. Existing development within the project site includes two pasture areas, Cabin Bar Ranch Road (that forms a cul-de-sac within the area where the proposed bottling plant is planned), corrals, and empty modern-era pond basins. These development disturbances may have displaced cultural resources from their original location.

PCR located CBR-S-1/H outside of the Study Area and identified several artifacts (a pottery sherd, a ground stone artifact and several pieces of obsidian debitage) that are associated with it. Many of the artifacts could not be located since the area had been covered with clean fill soils by the Applicant per the request of Ms. Yonge to ensure protection from looting. PCR also located the 20-m-long linear rock alignment that is likely associated with P-14-005197 (Cartago Boat Landing); it is approximately 80 m southeast of the nearest construction activity) but within the Cabin Bar Ranch property. The rock alignment consists of approximately 50 unmodified rounded river rock cobbles [average diameter – 30 centimeters (cm)] that were also used to construct the walls of the stone ruin at entrance to the Cabin Bar Ranch. The stones were likely taken from nearby stream beds or from the foothills of the eastern Sierra Mountains' escarpment one mile to the west. One piece of water-logged timber was identified 12 m north of the rock alignment that may have been associated with the landing. No other historic-period artifacts were found in the vicinity of the rock alignment although the area was heavily vegetated. P-14-005197 is evaluated in **Section 4.E, Historic Resources**, of this Draft EIR.

PCR also located CBR-S-2 and identified three new prehistoric isolate resources (CBR-I-1, -2, and -3) within or in the immediate vicinity of the project site during the pedestrian survey. These resources are described in detail, by resource, as follows.

CBR-S-2

PCR identified several prehistoric obsidian flakes, small glass bottle fragments, and a farming implement in the area where CBR-S-2 was mapped by Johnson in 2010 which suggests at least some of them may be the same artifacts. PCR classifies CBR-S-2 as an archaeological "site" that has undergone considerable disturbance from the construction of Cabin Bar Ranch Road, the empty pond basins, underground utility lines, and vegetation growth. As a result, the artifacts may have been displaced from their original location. The ground surface visibility varied from poor to good (25 to 75 percent) primarily due to vegetation cover and Cabin Bar Road. PCR attempted to but could not locate the obsidian Desert Side-notch projectile point and biface that were placed in a distinct location by Johnson within the new site boundaries of the resource. Given the moderate amount of artifacts discovered on the surface, the high potential to encounter buried resources, and to evaluate the resource pursuant to CEQA, PCR conducted a Phase II Testing and Evaluation Assessment of CBR-S-2. The results of the subsurface testing effort are presented on the following pages.

CBR-I-1

This resource consists of two isolated prehistoric waste flake (debitage) made from obsidian that were identified within one meter of each other. No cortex or modification is present on the artifacts. The artifacts are located within the project site in the corral area where the proposed bottle plant facility is planned. The artifacts were not collected by PCR.

CBR-I-2

This resource is an isolated prehistoric waste flake (debitage) made from obsidian. No cortex or modification is present on the artifact. It is located within the project site within the alignment for the proposed new access road. The artifact was not collected by PCR.

CBR-I-3

This resource consists of two isolated prehistoric waste flake (debitage) made from obsidian that were identified within five meters of each other. No cortex or modification is present on the artifacts. The artifacts are located outside the project site approximately 15 meters east of the alignment for the proposed new access road. The artifacts were not collected by PCR.

It is possible that archaeological resources were not identified during PCR's pedestrian survey as a result of the historic land use (ranch activities), paved/dirt access road construction and operation, and the dense vegetation and irrigation activities that obstructed the ground surface in many areas of the project site. These same land use disturbances have also likely displaced, removed, or destroyed archaeological resources that may have once existed within the project site.

Archaeological Testing and Evaluation

Seven obsidian flakes (all debitage) were identified at depth during the testing effort. The artifacts were recovered in STPs 3, 5, 6, 31 and 38 at various levels. PCR also identified 19 obsidian flakes from the surface in the immediate vicinity of the STPs. It is unknown whether these surface artifacts were the same ones identified by Johnson in 2010. Thirty-eight percent (n=10) of the flakes were utilized including one flake (Catalog 16) that was utilized on all edges, including the notch. One flake exhibits attributes of platform preparation or pressure flaking.

No additional artifact classes or features were encountered and no substantial prehistoric or historic period deposit was identified. The sediment encountered during the testing effort is roughly consistent across the resource. It is composed of a moist semi-compact light brownish sand (75%) intermixed with gravels (0.5 to 3 cm in diameter, angular and subangular) (25%) that transitions into even moister sediment with a higher sand content at lower depths. Root systems from surface vegetation disturbed many STPs in the upper 10 cm of the units.

(2) Evaluation of Resources within the Project Site

As discussed above, PCR identified four archaeological resources located within or in the immediate vicinity of the project site (CBR-S-2, CBR-I-1, -2, -3). In order to determine whether the identified resources qualify as an archaeological resource pursuant to §15064.5 of the CEQA Guidelines, PCR conducted an eligibility evaluation of the four resources identified within the project site, including a subsurface archaeological testing and evaluation program on one of the resources (CBR-S-2). The other resources (CBR-S-1/H, P-14-005197, TS-1 and -2, and CA-INY-43/H) are located far enough away from the project site and will not be impacted by the proposed project.

Evaluation of archaeological resources is determined by conducting an "evaluation" of a resource's eligibility for listing in the National Register (per Section 106) and California Register (per CEQA); determining whether it qualifies as a "unique archaeological resource" (per CEQA); and determining whether the resource retains integrity. This is achieved by applying the National Register and California Register criteria (including criteria for a "unique archaeological resource" per CEQA) to the resources set out in the subsection 1.a, Regulatory Setting, of this section. Prehistoric archaeological resources (such as CBR-S-2, CBR-I-1, -2, and -3) are most often recommended eligible under Criterion D or 4 (of the National or California Registers, respectively), which is the potential for the resource to contribute information important to the study of history or prehistory. If a resource is determined eligible for listing or qualifies as a "unique archaeological resource", then the resource is considered an archaeological resource pursuant to CEQA §15064.5 and any substantial adverse change to the resource is considered a significant impact on the environment.

(a) CBR-S-2

Lithic scatters (i.e., scatters of chipped stone artifacts resulting from prehistoric stone tool manufacturing activities) are one of the most abundant resource types in California and several are known to exist in the vicinity of the project site as indicated by the cultural resources records search results. The results of PCR's phase II testing and evaluation effort revealed that the resource lacks a buried stratified archaeological deposit which reduces the potential for accurate interpretations of the resource and its potential to contribute information important to the study of history or prehistory (Criterion D and 4). In addition, PCR conducted a thorough testing program and formal recordation at the resource that likely recovered the majority of the data potential from the resource. If additional research on the resources is requested, the artifacts and this analysis will be provided to the interested individuals. Further studies should focus of the association of CA-INY-43/H, CBR-S-1/H, CBR-S-2, and *Wo-wo-ni-di-gee.* Finally, PCR has collected all the artifacts from the resources which will limit many of the impacts to the resources from the proposed project.

As a result of the poor structural integrity of the resource, lack of subsurface stratified deposits, and the thorough phase II testing and recordation efforts that have exhausted its research potential, CBR-S-2 is recommended as ineligible for listing in the California or National Registers and does not qualify as a "unique archaeological resource" pursuant to CEQA. Therefore, impacts to the resources are not considered a significant impact on the environment and no further work is recommended at the resource.

(b) CBR-I-1, -2, and -3

The scattered and random nature of the three isolated resources (CBR-I-1, -2, and -3) suggests that past and current land-use disturbances transported these items out of context from their original location. The lack of solid provenance data for the isolate resources has diminished their research potential to contribute information important to the study of history or prehistory. In addition, isolate resources are unlikely to retain additional buried components that would provide additional information as to the prehistory of the region (Criterion D and 4). Finally, PCR has thoroughly recorded all of the resources on DPR Site Forms for additional research. As a result of these factors, the three isolate resources are recommended as ineligible for listing in the California or National Registers and they do not qualify as "unique archaeological resource" pursuant to CEQA. Therefore, impacts to these resources are not considered a significant impact on the environment and no further work is recommended at the resources.

2. ENVIRONMENTAL IMPACTS

a. Thresholds of Significance

(1) Archaeological Resources

Appendix G of the *CEQA Guidelines* contains the Initial Study Environmental Checklist form used during preparation of the project Initial Study (contained in **Appendix A** of this EIR). The Initial Study Environmental Checklist questions relating to archaeological and paleontological resources have been utilized as the thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

ARCH-1 Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines; or

ARCH-2 Disturb any human remains, including those interred outside of formal cemeteries.

(2) Paleontological Resources

Based on the Environmental Checklist question, the proposed project would normally have a potentially significant impact on paleontological resources if it would:

ARCH-3 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

b. Methodology

(1) Archaeological Resources

As described above, PCR conducted various archival record searches, historic background research, and a pedestrian survey to identify archaeological resources within the project site. In order to determine whether the identified resources qualify as an archaeological resource pursuant to §15064.5 of the CEQA Guidelines, PCR conducted an eligibility evaluation of the four resources identified within the project site, including a subsurface archaeological testing and evaluation program on one of the resources (CBR-S-2). As result of the evaluation effort, the four archaeological resources (CBR-S-2, CBR-I-1, -2, -3) are recommended as ineligible for listing in the National and California Registers and do not qualify as "unique archaeological resource" pursuant to CEQA. Therefore, impacts to these resources are not considered a significant impact on the environment and no further analysis is warranted for the resources.

However, it is possible that previously unknown archaeological resources exist at depth within the project site. PCR reviewed the existing conditions within the project site and the results of the cultural resources records search and archaeological testing effort in order to assess the potential for the project site to contain buried archaeological resources.

(2) Paleontological Resources

To develop a baseline paleontological resources inventory of the project site and surrounding area and to assess the potential paleontological productivity of each stratigraphic unit present, the published and available unpublished geological and paleontological literature was reviewed, as described above; and stratigraphic and paleontological inventories were compiled, synthesized, and evaluated by the staff of the NHMLAC. These methods are consistent with the Society of Vertebrate Paleontology ("SVP") guidelines for assessing the importance of paleontological resources in areas of potential environmental effect. PCR also conducted a pedestrian survey to identify known resources and/or fossiliferous geological formations within the project site. Since no known paleontological resources were identified on the surface within the project site, the research described above was conducted in order to assess the potential for the project site to contain buried paleontological resources.

c. Project Features

As previously discussed, the four archaeological resources identified on the surface of the project site do not qualify as archaeological resources pursuant to §15064.5. However, it is possible that previously unknown archaeological and paleontological resources exist at depth within the project site. Therefore, the focus of this evaluation is on construction activities that have the potential to encounter buried archaeological and paleontological resources. It is anticipated that construction excavations will occur across the project site to various depths below the surface or below grade.

d. Analysis of Project Impacts

(1) Archaeological Resources

ARCH-1 Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the CEQA Guidelines?

As previously discussed, the project would not cause a substantial adverse change in the significance of a *known* archaeological resource pursuant to §15064.5 of the CEQA Guidelines. However, given the identification of more than 30 archaeological resources within and in the immediate vicinity of the project site and the favorable natural conditions (i.e., Owens Lake, Cartago Creek, natural springs, and vegetation communities) that would have attracted prehistoric and historic inhabitants to the project site, the project has the potential to cause a substantial adverse change in the significance of previously unknown buried archaeological resources pursuant to §15064.5 of the CEQA Guidelines during implementation of the proposed project. The overall sensitivity of the project site with respect to buried archaeological resources appears to be high. Therefore, impacts on buried archaeological resources are considered to be potentially significant.

ARCH-2 Would the project disturb any human remains, including those interred outside of formal cemeteries?

As previously discussed, a SLF search of the project site requested by PCR from the NAHC in Sacramento failed to indicate the presence of Native American cultural resources in the SLF database within the project site or Cabin Bar Ranch property. The NAHC results also noted, however, that the NAHC archive is not exhaustive and a negative result does not preclude the discovery of Native American cultural resources

during any project groundbreaking activity. According to records examined at the CHRIS-EIC, several Native American human remains have been encountered during past construction activities and several known Native American cemeteries are known to exist in the immediate vicinity of the project site and Cabin Bar Ranch property and in the surrounding region. Given the sensitive and confidential nature of these types of resources, no specific locational or descriptive information will be provided. Although the project would not disturb any *known* human remains, the project has the potential to disturb *previously unknown* human remains during implementation of the proposed project. As a result, the overall sensitivity of the project site with respect to buried human remains appears to be high. Therefore, impacts on buried human remains are considered to be potentially significant.

(2) Paleontological Resources

ARCH-3 Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

As previously discussed, several fossil localities have been identified in the region at unknown depths below the ground surface in soil/sediment deposits that currently exist at an unknown depth within the project site. No paleontological resources were identified by PCR during the pedestrian survey but this may be a result of the poor surface visibility within the majority of the project site that could have obstructed the identification of resources on the surface. According to the NHMLAC, deep excavations associated with the proposed project will likely encounter paleontological resources (vertebrate fossils). Although the project would not directly or indirectly destroy a *known* unique paleontological resource or site or unique geologic feature, the project has the potential to disturb *previously unknown* paleontological resources during implementation of the proposed project. As a result, the overall sensitivity of the project site with respect to buried paleontological resources appears to be high. Therefore, impacts on buried paleontological resources are considered to be potentially significant.

3. MITIGATION MEASURES

a. Archaeological Resources

The following mitigation measures have been prescribed to reduce potentially significant impacts on archaeological resources and human remains, including those interred outside of formal cemeteries:

Mitigation Measure ARCH-1a: The Applicant shall retain a qualified archaeological monitor and Native American monitor who shall be present during construction excavations such as grading, trenching, grubbing, or any other construction excavation activity associated with the proposed project. The frequency of monitoring shall be based on the rate of excavation and grading activities, proximity to known archaeological resources, the materials being excavated (native versus fill soils), and the depth of excavation, and if found, the abundance and type of archaeological resources encountered. Full-time monitoring can be reduced to part-time inspections if determined adequate by the archaeological monitor.

Mitigation Measure ARCH-1b: In the event that archaeological resources are unearthed during ground-disturbing activities, the archaeological monitor shall be empowered to halt or redirect ground-disturbing activities away from the vicinity of the find so that the find can

be evaluated. Work shall be allowed to continue outside of the vicinity of the find. All archaeological resources unearthed by project construction activities shall be evaluated by the archaeologist. The Applicant shall coordinate with the archaeologist, the County, and the Native American representative to develop an appropriate treatment plan for the resources. Treatment may include implementation of archaeological data recovery excavations to remove the resource or preservation in place. The landowner, in consultation with the archaeologist, the County, and the Native American representative shall designate repositories in the event that archaeological material is recovered.

Mitigation Measure ARCH-1c: The archaeological monitor shall prepare a final report at the conclusion of archaeological monitoring. The report shall be submitted by the Applicant to the County, the Eastern Information Center, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the project and required mitigation measures. The report shall include a description of resources unearthed, if any, treatment of the resources, and evaluation of the resources with respect to the California Register of Historical Resources and the National Register of Historic Places.

Mitigation Measure ARCH-2a: If human remains are encountered unexpectedly during implementation of the proposed project, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the person(s) thought to be the Most Likely Descendent (MLD). The MLD may, with the permission of the land owner, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The MLD shall complete their inspection and make their recommendation within 48 hours of being granted access by the land owner to inspect the discovery. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Upon the discovery of the Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this mitigation measure, with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.

Whenever the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or the landowner or his or her authorized representative rejects the recommendation of the descendants and the mediation provided for in Subdivision (k) of PRC Section 5097.94, if invoked, fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance.

b. Paleontological Resources

The following mitigation measures have been prescribed to reduce potentially significant impacts on paleontological resources:

Mitigation Measure ARCH-3a: If construction excavations will reach depths of five feet or greater, a qualified paleontologist shall attend a pre-grading/excavation meeting and develop a paleontological monitoring program for excavations into older Quaternary Alluvium deposits. A qualified paleontologist is defined as a paleontologist meeting the criteria established by the Society for Vertebrate Paleontology. The qualified paleontologist shall supervise a paleontological monitor who shall be present at such times as required by the paleontologist during construction excavations below five feet or greater into older Quaternary Alluvium deposits. Monitoring shall consist of visually inspecting fresh exposures of rock for larger fossil remains and, where appropriate, collecting wet or dry screened sediment samples of promising horizons for smaller fossil remains. The frequency of monitoring inspections shall be determined by the paleontologist and shall be based on the rate of excavation and grading activities, the materials being excavated, and the depth of excavation, and if found, the abundance and type of fossils encountered.

Mitigation Measure ARCH-3b: If a potential fossil is found, the paleontological monitor shall be allowed to temporarily divert or redirect grading and excavation activities in the area of the exposed fossil to facilitate evaluation and, if necessary, salvage. At the paleontologist's discretion and to reduce any construction delay, the grading and excavation contractor shall assist in removing rock samples for initial processing. Any fossils encountered and recovered shall be prepared to the point of identification and catalogued before they are donated to their final repository. Any fossils collected shall be donated to a public, non-profit institution with a research interest in the materials, such as the Eastern California Museum or the Natural History Museum of Los Angeles County. Accompanying notes, maps, and photographs shall also be filed at the repository.

Mitigation Measure ARCH-3c: The paleontologist shall prepare a report summarizing the results of the monitoring and salvaging efforts, the methodology used in these efforts, as well as a description of the fossils collected and their significance. The report shall be submitted by the Applicant to the lead agency, the Eastern California Museum, the Natural History Museum of Los Angeles County, and other appropriate or concerned agencies to signify the satisfactory completion of the project and required mitigation measures.

4. CUMULATIVE IMPACTS

Eight related projects have been identified in the project area, as summarized in **Section 3.0, General Description of the Environmental Setting**, in this Draft EIR. Four of the projects are proposed by the Los Angeles Department of Water and Power (LADWP) and involve dust control on the Owens Lake bed; ecosystem mitigation within the Lower Owens River, including the re-establishment of riverine/riparian habitat and ecosystems; installation of a solar array in a 1,600-acre area in the southern Owens Valley; and a master plan for the management of Owens Lake resources, including water conservation. The remaining related projects include the establishment of a program for permitting the development of renewable energy projects and assurance of endangered species protections throughout the Mojave and Colorado deserts in California; a proposal to increase trona ore production north of Cartago; the expansion of the Dirty Socks

Duck Club, a 292-acre parcel used for the creation of waterfowl habitat on the shoreline of Owens Lake; and Caltrans's proposed realignment of Highway 395 adjacent to Cabin Bar Ranch.

a. Archaeological Resources

Cumulative impacts associated with archaeological resources would be less than significant since the proposed project is required to comply with the mitigation measures and regulations cited above in the event resources are found. These regulations include Public Resources Code Section 21083.2 or Public Resources Code Section 21084.1 and CEQA Guidelines Section 15064.5. Furthermore, impacts on archaeological resources associated with the proposed project are considered less than significant with implementation of applicable mitigation measures typically employed for development projects in the area on sites with sensitivity for such resources, as described above. Depending on the sensitivity of the related project sites, which are discussed and identified in **Section 3.0, General Description of the Environmental Setting**, of this Draft EIR, mitigation measures would likely be required for discretionary projects that have the potential to cause significant impacts to undiscovered resources. Most, if not all, of the related projects are located in undeveloped rural areas where the potential to encounter and have a significant impact on surface resources is likely. Since significant impacts to previously unknown buried resources would likely be limited to only those projects where construction activities involve excavation into native soils, most of the projects are likely to impact previously unknown buried resources. Furthermore, for those projects that may have potential for significant impacts, there is a reasonable expectation that if resources are encountered during construction they would be properly mitigated. Therefore, cumulative impacts on previously unknown buried resources from related projects are expected to be less than significant, and the proposed project's incremental contribution to such impacts in light of the required mitigation measures would not be cumulatively considerable.

b. Paleontological Resources

In addition, with regard to paleontological resources, it is likely that many of the related projects in the area, particularly those with potential for substantial excavation, would be subject to environmental review. If potential for significant impacts on paleontological resources is identified, mitigation measures similar to those proposed for the project would be implemented. With implementation of mitigation measures by related projects and the proposed project, cumulative impacts on paleontological resources would be less than significant, and the proposed project's contribution to such impacts would not be cumulatively considerable.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

a. Archaeological Resources

Based on the foregoing, with implementation of the mitigation measures above, the proposed project would not:

- Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5; or,
- Disturb any human remains, including those interred outside of formal cemeteries.

Thus, with implementation of the mitigation measures above, which provide for appropriate treatment and/or preservation of resources if encountered, potentially significant impacts to archaeological resources, and human remains, including those interred outside of formal cemeteries, would be reduced to a less than significant level.

b. Paleontological Resources

Based on the foregoing, with implementation of the mitigation measures above, which provide for avoidance and recovery of resources if encountered, the proposed project would not directly or indirectly destroy a unique paleontological resource or site, or a unique geologic feature.

Thus, with implementation of the mitigation measures above, potentially significant impacts to paleontological resources would be reduced to a less than significant level.

4.0 ENVIRONMENTAL IMPACT ANALYSIS
E. HISTORICAL RESOURCES

INTRODUCTION

The purpose of this section is to identify and evaluate historical resources that could be affected by implementation of the proposed project. Historical resources are any object, building, structure, site, area, place, record, or manuscript which are listed in or eligible for listing in the National Register of Historic Places, California Register of Historical Resources or a local register of historical resources. Resources from the historic period that are determined to be historically significant or significant in architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the determination is supported by substantial evidence in light of the whole record.

The following analysis of historical resources summarizes the findings of the Historical Resources Assessment and Environmental Impact Analysis ("Technical Report") for the project site, prepared by PCR Services Corporation (PCR) in May 2012. This report is included in Appendix G of this Draft EIR. The following analysis provides a discussion of the environmental setting, including the regulatory framework and eligibility criteria, identifies and develops the themes and construction history associated with the property in the historic context, evaluates the eligibility of potential historical resources within the Project site for listing in the federal, state and local registers, and analyzes potential Project impacts on historical resources in compliance with CEQA.

1. ENVIRONMENTAL SETTING

a. Regulatory Framework

Historical resources fall within the jurisdiction of several levels of government. Federal laws provide the framework for the identification, and in certain instances, protection of historical resources. Additionally, states and local jurisdictions play active roles in the identification, documentation, and protection of such resources within their communities. The National Historic Preservation Act (NHPA) of 1966, as amended; and the California Environmental Quality Act (CEQA); the California Register of Historical Resources, Public Resources Code (PRC) 5024 are the primary federal, state and local laws governing and affecting preservation of historical resources of national, state, regional, and local significance. A description of these laws and regulations is provided below.

(1) Federal Level

(a) National Register of Historic Places

First authorized by the Historic Sites Act of 1935, the National Register of Historic Places (National Register) was established by the National Historic Preservation Act of 1966, as "an authoritative guide to be used by Federal, State, and local governments, private groups and citizens to identify the nation's cultural resources

and to indicate what properties should be considered for protection from destruction or impairment."[1] The National Register recognizes properties that are significant at the national, state, and local levels.

To be eligible for listing in the National Register, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. Four criteria have been established to determine the significance of a resource:[2]

A. It is associated with events that have made a significant contribution to the broad patterns of our history;

B. It is associated with the lives of persons significant in our past;

C. It embodies the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction;

D. It yields, or may be likely to yield, information important in prehistory or history.

A property eligible for the National Register must meet one or more of the above criteria. In addition, unless the property possesses exceptional significance, it must be at least fifty years old to be eligible for National Register listing. However, the National Register does not prohibit the consideration of properties less than fifty years in age whose exceptional contribution to the development of American history, architecture, archaeology, engineering, and culture can be clearly demonstrated.

In addition to meeting the criteria of significance, a property must also have integrity. "Integrity is the ability of a property to convey its significance."[3] According to the *National Register Bulletin*, the National Register recognizes seven aspects or qualities that, in various combinations, define integrity. To retain historic integrity a property will always possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance.[4] The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association. The following is excerpted from the *National Register Bulletin, How to Apply the National Register Criteria for Evaluation,* which provides guidance on the interpretation and application of these factors:

- Location is the place where the historic property was constructed or the place where the historic event occurred.[5]

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1 *Code of Federal Regulations (CFR), 36 § 60.2.*

2 *How to Complete the National Register Registration Form, National Register Bulletin, U.S. Department of Interior, National Park Service, 1997. This bulletin contains technical information on comprehensive planning, survey of cultural resources and registration in the National Register of Historic Places.*

3 *How to Apply the National Register Criteria for Evaluation, National Register Bulletin, U.S. Department of Interior, National Park Service, 1997. p. 44.*

4 *Ibid.*

5 *"The relationship between the property and its location is often important to understanding why the property was created or why something happened. The actual location of a historic property, complemented by its setting is particularly important in recapturing*

(Footnote continued on next page)

- Design is the combination of elements that create the form, plan, space, structure, and style of a property.[6]

- Setting is the physical environment of a historic property.[7]

- Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.[8]

- Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.[9]

- Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.[10]

- Association is the direct link between an important historic event or person and a historic property.[11]

In assessing a property's integrity, the National Register criteria recognize that properties change over time; therefore, it is not necessary for a property to retain all its historic physical features or characteristics. The property must, however, retain the essential physical features that enable it to convey its historic identity.[12]

For properties which are considered significant under National Register Criteria A and B, the *National Register Bulletin, How to Apply the National Register Criteria for Evaluation* states that a property that is significant for its historic association is eligible if it retains the essential physical features that made up its character or appearance during the period of its association with the important event, historical pattern, or person(s).[13]

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the sense of historic events and persons. Except in rare cases, the relationship between a property and its historic associations is destroyed if the property is moved." Ibid.

6 *"A property's design reflects historic functions and technologies as well as aesthetics. It includes such considerations as the structural system; massing; arrangement of spaces; pattern of fenestration; textures and colors of surface materials; type, amount, and style of ornamental detailing; and arrangement and type of plantings in a designed landscape." Ibid.*

7 *Ibid, p. 45.*

8 *"The choice and combination of materials reveals the preferences of those who created the property and indicated the availability of particular types of materials and technologies. Indigenous materials are often the focus of regional building traditions and thereby help define an area's sense of time and place." Ibid.*

9 *"Workmanship can apply to the property as a whole or to its individual components. It can be expressed in vernacular methods of construction and plain finishes or in highly sophisticated configurations and ornamental detailing. It can be based on common traditions or innovative period techniques." Ibid.*

10 *"It results from the presence of physical features that, taken together, convey the property's historic character." Ibid.*

11 *"A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer. Like feeling, association requires the presence of physical features that convey a property's historic character. . . Because feeling and association depend on individual perceptions, their retention alone is never sufficient to support eligibility of a property for the National Register." Ibid.*

12 *Ibid, p. 46.*

13 *Ibid.*

In assessing the integrity of properties that are considered significant under National Register Criterion C, the *National Register Bulletin, How to Apply the National Register Criteria for Evaluation* provides that a property important for illustrating a particular architectural style or construction technique must retain most of the physical features that constitute that style or technique. As stated therein,

"A property that has lost some historic materials or details can be eligible if it retains the majority of the features that illustrate its style in terms of the massing, spatial relationships, proportion, pattern of windows and doors, texture of materials, and ornamentation. The property is not eligible, however, if it retains some basic features conveying massing but has lost the majority of the features that once characterized its style."

(2) State Level

(a) California Register of Historical Resources Classification Codes

The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also carries out the duties as set forth in the Public Resources Code (PRC) and maintains the California Historic Resources Inventory and California Register of Historical Resources.[14] The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the state's jurisdictions. Also implemented at the state level, CEQA requires the identification of substantial adverse impacts that may affect the significance of identified historical resources through an environmental review process. Further discussion of OHP survey methodology and specific criteria to determine the significance of a resource are provided in Section II, Part C, of this document below.

Created by Assembly Bill 2881 in 1992, the California Register of Historical Resources (California Register) is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change."[15] The criteria for eligibility for the California Register are based upon National Register criteria.[16] Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.[17]

The California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register of Historic Places and those formally Determined Eligible for the National Register of Historic Places;
- California Registered Historical Landmarks from No. 770 onward;

[14] *California Public Resources Code § 5024.1(a).*

[15] *Ibid.*

[16] *California Public Resources Code § 5024.1(b).*

[17] *California Public Resources Code § 5024.1(d).*

- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.[18]

Other resources that may be nominated to the California Register include:

- Individual historical resources;
- Historical resources contributing to historic districts;
- Historical resources identified as significant in historical resources surveys with significance ratings of Category 1 through 5;
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.[19]

(b) California Register Criteria

To be eligible for the California Register, a historical resource must be significant at the local, state, or national level, under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

Additionally, a historical resource eligible for listing in the California Register must meet one or more of the criteria of significance described above and retain enough of its historic character or appearance to be recognizable as a historical resource and to convey the reasons for its significance. Historical resources that have been rehabilitated or restored may be evaluated for listing.[20]

Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. The resource must also be judged with reference to the particular criteria under which it is proposed for eligibility. It is possible that a historical resource may not retain sufficient integrity

[18] *Ibid.*

[19] *California Public Resources Code § 5024.1(e).*

[20] *California Code of Regulations, California Register of Historical Resources (Title 14, Chapter 11.5), § 4852(c).*

to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.[21]

(c) California Office of Historic Preservation Survey Methodology

The evaluation instructions and classification system prescribed by the California Office of Historic Preservation in its Instructions for Recording Historical Resources provide a three-digit evaluation rating code for use in classifying potential historical resources. The first digit indicates one of the following general evaluation categories for use in conducting cultural resource surveys:

1. Listed on the National Register or the California Register;
2. Determined eligible for listing in the National Register or the California Register;
3. Appears eligible for the National Register or the California Register through survey evaluation;
4. Appears eligible for the National Register or the California Register through other evaluation;
5. Recognized as Historically Significant by Local Government;
6. Not eligible for any Listing or Designation; and
7. Not evaluated for the National Register or California Register or needs re-evaluation.

The second digit of the evaluation status code is a letter code indicating whether the resource is separately eligible (S), eligible as part of a district (D), or both (B). The third digit is a number that is used to further specify significance and refine the relationship of the property to the National Register and/or California Register. Under this evaluation system, categories 1 through 4 pertain to various levels of National Register eligibility. The California Register, however, may include surveyed resources with evaluation rating codes through level 5. In addition, properties found ineligible for listing in the National Register, California Register, or for designation under a local ordinance are given an evaluation status code of 6.

(3) Local Level

(a) County of Inyo

The County of Inyo has not adopted a local historic preservation ordinance. Section 15.24.020 of the County of Inyo Code codifies Section 15268 of the State *CEQA Guidelines,* which addresses activities exempted from CEQA and states that demolition permits for buildings greater than 50 years of age that may be of historical, archaeological, or architectural significance may not be exempt. The Inyo-Mono Association of Government Entities (IMAGE) in collaboration with the Inyo Mono Advocates for Community Action (IMACA) conducted a historic preservation survey of Inyo County from April 1, 1980 to May 1, 1981. However, the survey was never certified by Inyo County or the State Office of Historic Preservation, and therefore the survey findings are not enforceable under CEQA. The project site was not included in this survey.

[21] *Ibid.*

b. Identified Historical Resources in the Immediate Project Vicinity (1/2 mile)

PCR conducted a records search at the Eastern Information Center (CHRIS-EIC) and determined that there is one previously recorded historical resource, a California Point of Historical Interest, within a half-mile radius of the project site. The Cartago Boat Landing (Daneri's Landing) (CHPI-INY-006/P-14-005197) was registered as a California Point of Historical Interest on June 6, 1980. The plaque dedicating the site is located on the east side of Highway 395 on the project site.

c. Historic Context

(1) Development of the Project Site

The identified resources situated within the subject property are located on Assessor Parcel No. 33-020-01. In 1950, the subject property was legally described as Township 19 South, Range 36 East, northeast of the southeast quarter of Section 1 (Assessor's Map Book 33, page 02, County of Inyo, California, 1950).

Before 1862, the project site was most likely in its natural state. The Paiute occupied the land along the Western shore of Owens Lake and were irrigation farmers. The project site was most likely occupied after the Homestead Act to 1862 was adopted by the United States. The first recorded property owner of the subject property was Espitacio Gomez in 1873. California Land Patent Number 58 for Inyo County discloses Espitacio Gomez purchased 160 acres on July 10, 1873 for two hundred dollars.[22] The property description was Lot 1 infractional NE ¼ and NE ¼ of SE ¼, Section 1, Township 19S, Range 36 East and N ½ of Lot 2 infractional SW ¼ of Section 6, Township 190S, Range 37E. According to the cash land sale paperwork, Espitacio Gomez erected a house on the property on June 1, 1871 and used the land solely for agriculture and ranching purposes. The land was described as having no minerals.

In 1865, a small scale rush erupted in Inyo County when gold was discovered by three Sonoran prospectors, led by Pablo Flores, to the north of Owens Lake at the Cerro Gordo mine. In the late 1860s, Mortimer W. Belshaw and Victor Beaudry controlled the Cerro Gordo Mines and established the Union Mining Company. In 1872, the Cerro Gordo Freighting Company, owned by Mortimer W. Belshaw and Victor Beaudry constructed a stagecoach station, warehouse, and general store on the project site. Bullion was transported across the lake on a steamer, the Bessie Brady (1872-1882), and unloaded at the Cartago Boat Landing, located on the project site, where the bullion was later transported on stagecoaches to Los Angeles. Between 1869 and 1882, Remi Nadeau was contracted to freight the bullion from Cartago to Los Angeles. The County of Inyo Assessment Book of 1881, held at the Eastern California Museum, reveals the project site (Assessor Parcel# 33-020-01) was part of the 160-acre tract still known as the Gomez Ranch in 1881. The assessment book describes the taxable property owned by the Cerro Gordo Freighting Company, including the Cerro Gordo Landing Station, the Nine Mile Canon Station, the Rose Springs Station, the New Coso Station, Minietta Mine (Lookout District), Minietta Mill, and the 160-acre Gomez Ranch in Cartago. The value of Gomez Ranch tract was $800 and existing improvements on the tract had total value of $1,700, a substantial sum at the time, indicating the presence of approximately five buildings and structures on the project site, given the mean average value of improvements owned by the Cerro Gordo Freighting Company in 1881 was $325 (see

[22] *Land entry file, DOCID 58, Espitacio Gomez, April 25, 1874, Inyo County, California. Section 1, Township 19-S, Range 36-E. Land Office; Records of the Bureau of Land Management; National Archives Building, Washington, DC.*

Table 2, Assessment Book 1881, Cerro Gordo Freighting Company, Cartago School District-Description of Property, on page 15 of the Historical Resources Assessment in Appendix G).

Between 1869 and 1882, Remi Nadeau was the leading wagon freighter of Southern California, and dominated the cargo traffic to the desert mining camps of Eastern California.[23] A letter from Remi Nadeau's great-great grandson Remi E. Nadeau describes the station house at Cartago. The stone ruin on the project site is likely the house described in this account.

> Nadeau's freighting company established stations a days travel apart, about 20 miles, along the route to Los Angeles. These stations consisted of corrals and a small house and were usually kept by a man and his wife. At these the teamsters and swampers were provided with lodgings and meals and the livestock with feed and water. I think the house at Cartago was similarly used. However, situated at the terminal as it was, it could have contained more rooms than the ones at other stations. Nadeau himself made frequent trips (by horse and buggy) along the route and it is quite likely that it was his custom to lodge there while at Cartago.[24]

According to local legend, the town of Cartago was established in June 1872 after John Baptiste Daneri, a Lone Pine businessman, constructed a warehouse, store and landing on the southwest shore of Owens Lake to capitalize on mining across Owens Lake at the Cerro Gordo mines.[25] Daneri named the area Carthage after the ancient city-state in North Africa, located on eastern side of Lake Tunis, which became one of the largest and most powerful seaports in the Mediterranean. The town of Carthage is noted on historical topographic maps from 1905 and 1907. Daneri did not actually own any part of the project site during this period according to County of Inyo assessor research. As a successful businessman in Lone Pine and co-owner of Denair and Stewart, General Merchandise, he likely saw Cartago as another lucrative business opportunity and pursued his business interests there as a commercial investor in the Cerro Gordo Freighting Company. The Pacific Coast Business Directory has only three entries listed under the town of Cartago: Belshaw & Titsworth, proprietors freight steamer Bessie Brady; Cerro Gordo Freighting Company, freighting; and Villagas A., hotel.[26] In addition to the Cartago Boat Landing where the Bessie Brady docked and the structures used by the Cerro Gordo Freighting Company, the directory indicates there was a hotel in the vicinity of the project site. Lone Pine, 18 miles south of Independence, was the primary commercial center in the area.

A topographic map from 1905 labels Cartago and Carthage along the southwest shore of Owens Lake. A carriage road branches off the main wagon road to two structures located near the Cartago Boat Landing, although the landing is not shown on the map. The carriage road is flanked by two structures to the east and west, most likely one of the two existing residences, Gomez Homestead (Residence 2) (P-14-011514) (ca. 1871) and Residence 3 (ca. 1910), on the project site. The extant residences have layered histories and are substantially altered by various additions during the 1950s and 1970s. Assessor records indicate the original portion of the Gomez Homestead (Residence 2) (P-14-011514) was constructed in 1871, per oral history given to the assessor office by an owner on October 25, 1976. An earlier notation on the assessor

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[23] *Remi Nadeau, "King of the Desert Freighter," 1981.*

[24] *Remi E. Nadeau, Letter to Dorothy C. Cragen, County Courthous (February 14, 1965)*

[25] *Bill Michael, Cartago (Independence, CA: Eastern California Museum: November 1981): 1.*

[26] *Pacific Coast Business Directory, p. 126. ca. 1872-1882. Held at the County of Inyo Library.*

records on December 4, 1956 describes the original portion of Gomez Homestead (Residence 2) (P-14-011514) as being constructed of "railroad ties". Physical inspection by PCR found evidence in Gomez Homestead (Residence 2) (P-14-011514) of squared timber construction which is consistent with the oral history. Based upon this evidence along with the cash land sale to Espitacio Gomez recorded in California Land Patent 58 for Inyo County, it appears that the timber portion of Gomez Homestead (Residence 2) (P-14-011514) was most likely erected by Gomez in 1871.

PCR did not find any visible evidence of squared timber construction in Residence 3. Located to the west of Gomez Homestead (Residence 2) (P-14-011514), across an old carriage road, Residence 3 has undergone extensive alterations and additions and lacks sufficient integrity for consideration as a historical resource. Inyo county building records indicate ranch support structures were constructed on the property during the 1950s, although it is likely these replaced earlier agricultural structures. The 1950s structures included: corral, dip chute, loading chute, chain link fence, scale, feed lot pins, and cattle squeeze (recently replaced in 1996).[27] In 1975, a pre-fabricated barn was assembled.[28] In 1986, other additions to the property included a well and pump, tank, and load dock.[29] The existing ranch support and agricultural structures are less than 45 years in age and do not meet the age guideline for consideration as historical resources.

Grazing Permits for the Mt. Whitney District reveal Arthur Lubken, a local Inyo County rancher, began ranching in the area in 1906, running cattle on Forest Service land during the spring, summer and fall, and moving them down to his brother's ranch (John Lubken's ranch near Independence) during the winter months. Although Lubken was ranching in the area and could possibly have occupied the project site as early as 1907 when he first ran cattle in Township 19, the grazing permits reveal he did not acquire the ranch in Cartago until April 17, 1926.[30]California Department of Transportation (Caltrans) as-built maps dated December 11, 1939 show a segment of the project site along the US Highway 395. The map is labeled with A.L. Lubkin and W.J. Clark as owners of the project site at the time. A "stone house" is depicted on the map in the same location as the existing stone ruin.

Title records reveal that on April 15, 1953 Arthur F. and Irene W. Lubken granted a portion of the project site (APN 33-020-11) to Edward L. and Dorothy M. Thornburg.[31] In 1978, the property, including land, cattle, and grazing lease, was sold to Rick Stevens.[32] During the 1980s the project site changed ownership several times. In 1982, the northwest corner of the ranch was subdivided into 16 one-acre residential lots and a model ranch-style home with irrigation pond was constructed on the central portion of APN 033-440-13.[33] Cabin Bar Ranch Road was paved along the northern property line from Highway 395 east into the new subdivision and the existing Cabin Bar Ranch sign above the road entrance was constructed in 1983. On July 9, 1986,

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27 *Inyo County Miscellaneous Building Record, Parcel 033-020-11, Sheet 3 of 10.*

28 *Inyo County Miscellaneous Building Record, Parcel 033-020-11, Sheet 4 of 10.*

29 *Inyo County Miscellaneous Building Record, Parcel 033-020-11, Sheet 7 of 10.*

30 *Grazing Permits, Mt. Whitney District, United States Department of Agriculture, Forest Service, reviewed in the Eastern California Museum, Independence, Inyo County, California.*

31 *Inyo County Recorder.*

32 *County of Inyo, Assessor Book 232 (August 15, 1978): 765.*

33 *"14 Homes Rising on Cattle Ranch," Los Angeles Times (June 27, 1982): 8.*

Anheuser-Busch purchased the Cabin Bar Ranch from Rick Stevens and planned to utilize the property's water resources.[34]

d. Existing Conditions

The project site encompasses 27.31 acres and is located south of the unincorporated town of Cartago, in western Inyo County, California. The project location is shown in **Figure 4.E-1,** *Regional and Vicinity Map*. Existing historical resources identified in the project vicinity include Gomez Homestead (Residence 2) (P-14-011514) (ca. 1871) and Residence 3 (ca. 1910) the stone ruin of the former Cartago Station House (P-14-011515) (ca. 1872), and the remains of the Cartago Boat Landing (Daneri's Landing) *(*CHPI-INY-006/P-14-005197) (ca. 1872). The Cartago Station House ruin and Cartago Boat Landing remains are located outside of the portion of Cabin Bar Ranch proposed for development and would not be affected by the proposed project. Gomez Homestead (Residence 2) and Residence 3 would be demolished under the proposed project. Other ineligible property improvements less than 45 years in age include a single-family residence built in 1983 as a model home, a trailer, agricultural structures, a multi-purpose chicken coup/barn/garage, a metal barn, corrals, water features including a man-made irrigation pond, the road network, and three entrances into the property. The remaining parcels are vacant grasslands (APNS 033-050-01, 033-050-02, 033-0505-03 and APN 033-050-04), with the exception of some alkaline covered soil within these parcels.

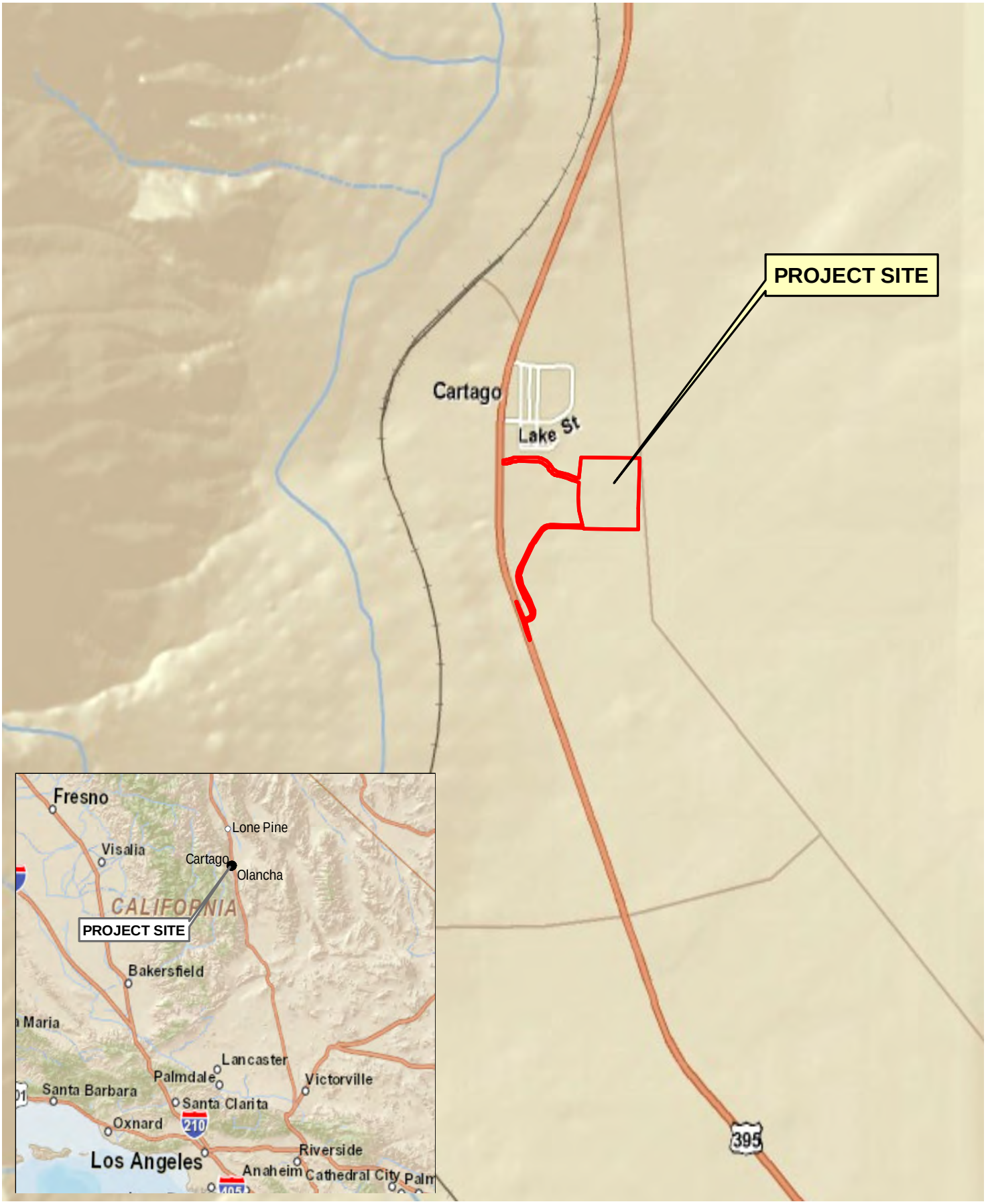
There is one designated historical resource on the project site: the Cartago Boat Landing (Daneri's Landing) *(*CHPI-INY-006/P-14-005197), a California Point of Historical Interest. Therefore, pursuant to the *CEQA Guidelines*, Section 15064.5, the landing site is considered a historical resource under CEQA. PCR prepared a survey update form to record new information obtained about this resource as a result of the field and research investigations. The PCR survey also identified and evaluated four previously unevaluated resources: an early 1870s stone ruin that once served as a station for the Cerro Gordo Transportation Company; Gomez Homestead (Residence 2) and Residence 3, and the old carriage road associated with the two residences.

(1) Cartago Station House (P-14-011515)

Located northwest of the entrance to Cabin Bar Ranch Road is a stone ruin, the Cartago Station House (P-14-011515). Based upon the site history and physical evidence, this stone ruin, located on APN 033-020-01, appears to have been built circa 1872 (**Figure 4.E-2,** *Stone Ruin*). Nadeau's account suggests a station house existed in Cartago during the 1870s and local history indicates that the Cerro Gordo Freighting Company and Daneri constructed a warehouse, store and landing there in 1872.

The 1881 Inyo County Assessment Book documents that the Cerro Gordo Freighting Company paid tax on existing improvements in Cartago valued at $1,700. The construction method, materials and physical characteristics of the ruin as well as the site history data indicate it was most likely associated with the Cerro Gordo Freighting Company activities on the site between 1872 and 1882 and was probably constructed at the same time as the Cartago Boat Landing (Daneri's Landing) *(*CHPI-INY-006/P-14-005197). The Cartago Station House (P-14-011515) may be the structure described in Nadeau's account of the station house at Cartago, previously cited above. Situated at the primary freight terminal on the western side of Owen's Lake, the house was said to be larger than those at the other stations, and it is possible Nadeau stayed in the

[34] *Sandy Harrison, "Bottling Plant Planned: Anheuser-Busch buys out Cabin Bar Ranch," July 11, 1986.*



PCR

N

0 1,000 2,000 Feet

Regional and Vicinity Map

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: ESRI Street Map, 2009; PCR Services Corporation, 2012.

FIGURE

4.E-1

PCR

Stone Ruin, South and West Elevations, View to Southeast

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: PCR Services Corporation, 2012.

FIGURE

4.E-2

Cartago house himself during his frequent trips along the route. The company stations consisted of corrals and a small house and were usually kept by a man and his wife. The teamsters and swampers were provided with lodgings and meals at the station, and the livestock were fed and watered.

The Cartago Station House (P-14-011515) originally had a rectangular plan and was oriented facing west toward the main north-south wagon road (now US 395). The west elevation had a center front door opening flanked by large rectangular window openings. A second door opening was located at the southeast corner of the building on the southern elevation, facing the road that enters the property at the existing Cabin Bar Ranch gate. A stone chimney was located in the center of the north elevation. Several small window openings were located along the top of the north and south elevations. Half of the interior space had a stone floor and the other half was probably covered with a wood floor; the space underneath the wood floor was probably used for storage.

The Cartago Station House (P-14-011515) has irregular rubble stone walls constructed of three- to ten-inch diameter granite, dolomite and Alabama mountain stones laid with a soft, granular, sand and lime mortar. The sand used in the mortar and plaster closely resembles the texture, color and consistency of the sand in Cartago Creek. The interior faces of the walls were originally supported by interior wood framing, against which the stonework was laid. There is no existing roof. Roughly half of the building has a stone floor, while the remaining floor space is earth. Miscellaneous wagon parts and mining equipment were added to fill in and reinforce the floor and walls. Adding cast-off implements, bottles or other unwanted refuse as fillers in rubble stone structures was a common building practice at the time. The metal implements resemble the parts of other nineteenth-century farming equipment, wagons and mining equipment presently on display at the Eastern California Museum in Independence, California. There is a large porcelain fragment embedded within the lower north wall of the ruin. There are several window openings with wood framing and metal headers reinforced with discarded steel wagon/mining machinery parts. A chimney without a hearth is located in the center of the north wall. A later metal insert was installed, probably sometime during the 1920s or 1930s when it appears the building received a new roof (since fallen in) and other structural repairs. Steel rebar reinforcing is evident on the east foundation wall where later repairs were made, and a second color of plaster appears to have been used in the repair of the stonework. The lower portion of the west elevation contains several red bricks and one yellow brick bearing the imprint of the Los Angeles Pressed Brick Company (L.A.P.B. Co. 84), which manufactured bricks between 1887 and 1926.[35] The "84" on the brick indicates a type of wedge or angled brick used for a curve of a furnace.[36] Historic debris scattered about the site include fragments of glass bottles, pottery, and heavily corroded metal fragments. Two of the fragments observed are pieces of an amber glass Clorox bottle, most likely manufactured circa 1929-30.[37]

The integrity of the Cartago Station House (P-14-011515) is extremely low. The building has largely failed. The roof is no longer extant, the floor is partially gone, the windows are removed leaving gaping openings and the walls have largely collapsed. The Cartago Station House (P-14-011515) retains evidence of the original construction method and materials, but it lacks integrity as a building or structure in every other respect. It can no longer be used for human habitation and can no longer be classified as a building or

[35] *Dan Mosier, Los Angeles Pressed Brick Company, Los Angeles yards, http://calbricks.netfirms.com/brick.lapbcobm.html.*

[36] *Email correspondence with Tom of the California Bricks Society, May 1, 2012.*

[37] *Linda C. Sandelin, Associate State Archaeologist, "Clorox Bottles: A Key to Their Identification and Date of Manufacture," June 11, 1998, http://www.fire.ca.gov/resource_mgt/archaeology/clorox.php*

structure; thus, the existing structure is appropriately classified as a ruin and was evaluated as a potential historic archaeological site.

(2) Cartago Boat Landing Site (Daneri's Landing) (CHPI-INY-006/P-14-005197)

The Cartago Boat Landing Site also known as Daneri's Landing (**Figure 4.E-3**, *Cartago Boat Landing*), is a linear feature consisting of large-granite boulders and sand located at the mouth of Cartago Creek, just north of the Creek. The landing is presently located at the edge of a meadow at the boundary of the springs located along the Spring Line fault that crosses Cabin bar Ranch. The stones are fairly large in dimension and sand between the boulders is similar to the sand in the creek as well as the sand in the stone house ruin. Some of the boulders appear to be coated with a layer of calcified sediment or minerals. Approximately 40 feet inland from the landing, PCR observed three distinct pieces of wood timbers among the scatter of cottonwood remains. The wood timbers were apparently waterlogged at one time and are heavily weathered, indicating they have been exposed to the elements for a long period of time.

(3) Gomez Homestead (Residence 2) (P-14-011514) and Residence 3

Gomez Homestead (Residence 2) and Residence 3, depicted in **Figure 4.E-4,** *Residence 2, Chicken Coop, Residence 3, and Carriage Road*, have lengthy histories. Assessor records suggest the original portion of the Gomez Homestead (Residence 2) was constructed in 1871, per oral history given to the County Surveyor by the owner on October 25, 1976. A sketch map and written notations on the Assessor's building record on December 4, 1956, describes the original portion of Gomez Homestead (Residence 2) as being "constructed of railroad ties."

Based on oral history represented in the existing Assessor Building Records, California Land Patent 58 for Inyo County, the historic topographic maps (1905 and 1907), and existing physical evidence, at least one of the two single-family residences on APN 033-020-01 may have been initially been a cabin constructed circa 1871 out of large squared wood timbers. PCR physically examined the two structures; a portion of wall visible in Gomez Homestead (Residence 2) reveals that a section of the house was indeed constructed of squared timber construction consistent with the County Surveyor's observations. Based upon this evidence, it appears that the timber portion of Gomez Homestead (Residence 2) was most likely erected by Espitacio Gomez in 1871.

A topographic map from 1905 locates Cartago and Carthage along the southwest shore of Owens Lake; a small carriage road branches off to the east from the main wagon road, and two structures are situated across from one another on the east and west side of the carriage road. The two structures are located near the Cartago Boat Landing, although the landing is not indicated. The structures and carriage road on the map are in the same approximate location as the existing road, Gomez Homestead (Residence 2) and Residence 3 identified during the PCR field survey. In 1956, a conventional wood-frame addition doubling the square footage of Gomez Homestead (Residence 2) was constructed to the south of the original timber cabin. The 1956 wood-frame addition was sided with asbestos shingles. In 1977, a 177 square foot addition was built on to the northeast corner of Gomez Homestead (Residence 2). Other alterations included an enclosed porch.[38]

[38] *Inyo County Residential Building Record, 200-610 S HWY 395, Parcel 033-020-11, Bldg 2.*

PCR

Cartago Boat Landing, View to East

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: PCR Services Corporation, 2012.

FIGURE

4.E-3

PCR

Residence 2, Chicken Coop, Residence 3, and Carriage Road, View to North

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: PCR Services Corporation, 2012.

FIGURE

4.E-4

The overall appearance and existing conditions of Gomez Homestead (Residence 2) and Residence 3, indicates that the integrity is low in terms of location, design, materials, workmanship, feeling, and association. The floor plans and dimensions of the residences have been altered by several additions, windows on both residences have been removed and replaced or boarded up, the board and batten siding is failing, missing and patched.

Other associated ranch structures on the property constructed during the 1950s included a corral, dip chute, loading chute, chain link fence, scale, feed lot pins, and cattle squeeze (replaced in 1986).[39] In 1975, a pre-fabricated barn was assembled.[40] In 1986, other additions to the property included a well and pump, tank, and load dock.[41] The existing ranch support and agricultural structures are less than 45 years in age and do not meet the age guideline for consideration as historical resources.

(a) Gomez Homestead (Residence 2) (P-14-011514)

Based on oral history represented in the existing Assessor Building Records, California Land Patent 58 for Inyo County, the historic topographic maps (1905 and 1907), and existing physical evidence, it appears that the timber portion of Gomez Homestead (Residence 2) was erected by Gomez in 1871. Gomez Homestead (Residence 2) is located east of the carriage road (**Figure 4.E-5,** *Residence 2, West and South Elevations*). The single-family vernacular Ranch-style Residence (ca. 1871; 1956 and 1977 additions) has a rectangular plan and is built of squared timber and conventional wood-frame construction with unfinished board and batten siding. The siding is in poor condition and appears to have failed in several areas. Squared wood timber construction is presently visible only in one interior wall of the residence, although timber construction may exist in the other walls. The roof is cross gabled with slightly overhanging eaves and is covered by composition roof shingles. There is a concrete masonry unit (CMU) chimney. Existing windows include wood 1/1 double-hung sash windows and replacement aluminum slider windows. The west façade has a three-part composite window with a center opening (the window has been removed) flanked by single-pane double-hung sash windows. The south elevation has one double-hung sash window. The primary entrance is through a wood door on the south elevation. There is a lean-to shed addition on the east elevation.

(b) Residence 3

According to the assessor's building record, Residence 3 (**Figure 4.E-6,** *Residence 3*) has an estimated construction date of 1910, although a structure is shown in the same location on the 1905 topographic map. Residence 3 is located across the carriage road to the west of Gomez Homestead (Residence 2). Residence 3 appears to be a substantially altered vernacular Ranch-style residence. A garage was constructed in 1954 north of the two residences and is now used as a chicken coop and barn. Residence 3 was sided with asbestos shingles in 1956. The septic system was updated in 1976 and replaced in 1987 with a holding tank and sewer lines to tie in with Cabin Bar Subdivision. In 1975 there was a 359 square foot addition on to the northwest portion of the 1,406 square foot residence and at an unknown date the 330 square foot porch was

[39] *Inyo County Miscellaneous Building Record, Parcel 033-020-11, Sheet 3 of 10.*

[40] *Inyo County Miscellaneous Building Record, Parcel 033-020-11, Sheet 4 of 10.*

[41] *Inyo County Miscellaneous Building Record, Parcel 033-020-11, Sheet 7 of 10.*

enclosed.[42] PCR did not observe any visible "railroad ties" inside Residence 3 and the assessor's building record makes no mention of any.

Residence 3 is rectangular in plan and is also built of conventional wood-frame construction covered with unfinished board and batten siding. The siding is in extremely poor condition and has failed in several places, and is patched with asbestos shingles in other areas. The primary entrance is through a wood panel door with four fixed windows located on the east elevation. The residence rests on wood beams slightly raised off the ground and is supported by a masonry point-load foundation. The roof is cross gabled with slightly overhanging eaves and is covered with composition roof shingles. A chimney rises from the center of the roof and has an arroyo stone veneer. All windows on the residence appear to be replacement aluminum slider windows (several have been removed or boarded over with plywood).

(4) Setting

Located near the two residences to the northeast is a wood-frame garage presently used as a chicken coup or barn constructed in the 1980s. In the central portion of the property is a pre-fabricated metal barn assembled in 1975, [43] corrals replaced in 1996, and a red storage shed used to support former cattle ranch operations. Old horse or mule shoes bearing 19th-century cut nails are associated with the early history of the property and are located in a wood box behind the storage shed. Cement lined irrigation or drainage ditches are located in the northern portion of the study area. Judging from their construction method, materials, condition and the size and age of a mature tree that has grown through the cement in one of the ditches, they may be associated with the early twentieth-century occupation of the site. In 1986, other additions included a well and pump, tank, and load dock.[44] The surrounding landscape presently consists of mature trees including Cottonwoods, a variety of shrubs, a grass lawn, an old heavily rutted dirt road, gravel roads, a mobile home and pastures are fenced with both wood and steel fencing. There are three access roads marked with entrance gates into the property, including the Cabin Bar Ranch gate and sign constructed in 1983, and two simple similar typical wood ranch gates near the center and at the southwestern corner of the property. Cartago Creek runs west to east through the property. A one-story wood-frame Ranch style model home constructed in 1983 was previously used to advertise the Cabin Bar Ranch subdivision.

(5) National and California Register Eligibility

The period of significance identified for the project site is ca. 1871 through the early 1880s, beginning with the construction in circa 1871 of the squared timber cabin by Espitacio Gomez, which is now contained within the walls of Gomez Homestead (Residence 2) (P-14-011514) (substantially altered) and including the circa 1872 Cartago Boat Landing (Daneri's Landing) *(*CHPI-INY-006/P-14-005197) (ruined) and the associated circa 1872 stone Cartago Station House (P-14-011515) (ruined) for the Cerro Gordo Freighting Company and ending with the burning of the steamer Bessie Brady in 1882 and construction of the railroad in the early 1880s, which reduced the volume of the Cerro Gordo Freighting Company's business. The property is associated with the following historical and architectural themes: Euro-American Explorations and Early Settlements (1833-1900); Mining (1872-1900); Ranching (1862-1986); Transportation –

[42] *Inyo County Residential Building Record, 200-610 S HWY 395, Parcel 033-020-11, Bldg 3.*

[43] *Inyo County Miscellaneous Building Record, Parcel 033-020-11, Sheet 4 of 10.*

[44] *Inyo County Miscellaneous Building Record, Parcel 033-020-11, Sheet 7 of 10.*

PCR

Residence 2, West and South Elevations, View to East

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: PCR Services Corporation, 2012.

FIGURE

4.E-5

PCR

Residence 3, North Elevation, View to Southwest

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: PCR Services Corporation, 2012.

FIGURE

4.E-6

Stagecoaches, Rails and Roads (1863–1959); and Stone Building Construction. The property was evaluated for conformance with criteria of the National Register and California Register. The Cartago Boat Landing (Daneri's Landing) *(*CHPI-INY-006/P-14-005197) is a previously designated California Point of Interest. The Cartago Boat Landing presently retains its historic significance and should continue to be listed under its current designation. In addition, two historic sites, the Cartago Boat Landing and the Cartago Station House, are considered eligible as potential historic sites under National Register Criteria A, B and D, and California Register Criteria 1, 2 and 4. Gomez Homestead (Residence 2) (P-14-011514) is substantially altered and only the original squared timber cabin wall is considered eligible under National Register Criterion D and California Register Criterion 4 as a potential historic site. The old carriage road to Gomez Homestead (Residence 2) (P-14-011514) is also considered eligible as a potential historic site under National Register Criterion D and California Register Criterion 4. The project site has a high probability for buried subsurface historic period remains associated with the activities of the Gomez Ranch and the Cerro Gordo Freighting Company from 1871 to the early 1880s. The remaining structures lack sufficient integrity or significance to be considered eligible as potential historical resources. Therefore, the property was assigned a California Historic Resources Status Code of 3CS, "appears eligible for the California Register as an individual property through survey evaluation," and the proposed project was analyzed for potential impacts to historical resources to comply with CEQA.

National Register Criteria A: Is associated with events that have made a significant contribution to the broad patterns of our history.

California Register Criteria 1: Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

Eligible historic sites identified on the property including the Cartago Boat Landing (Daneri's Landing) *(*CHPI-INY-006/P-14-005197) and the Cartago Station House (stone ruin) (P-14-011515) appear to be associated with the Cerro Gordo Freighting Company from 1872 through the early 1880s, which made a significant contribution to the broad patterns of National and California history and cultural heritage. The Cerro Gordo Freighting Company and associated mining activities in the Owens Valley played a formative role in the economic development of Inyo County, the surrounding region, and the City of Los Angeles during the late nineteenth century.

National Register Criteria B: Is associated with the lives of persons significant in our past.

California Register Criteria 2: Is associated with the lives of persons important in our past.

While previous owners of the project site, Espitacio Gomez, Arthur F. Lubken and Edward L. Thornburg, were farmers and cattle ranchers, it appears that their contribution to ranching, agriculture or commerce in the area does not rise to the threshold of significance for listing in the National or California Registers. The Cartago Boat Landing (Daneri's Landing) *(*CHPI-INY-006/P-14-005197) is associated with a prominent local businessman, John Baptiste Daneri (1831-1907), who resided in Lone Pine and may have invested in the Cerro Gordo Freighting Company and construction of the boat landing. The project site is associated with the productive life of Remi Nadeau (1818-1886), who organized the Cerro Gordo Freighting Company in 1873 with Mortimer Belshaw and Victor Beaudry, which hauled bullion from the Cerro Gordo mines to the port in San Pedro. Nadeau operated the enterprise from the Cartago terminal on the subject property and stayed in the Cartago Station House (P-14-011515) at the subject property during his frequent travels back and forth to San Pedro. Nadeau was an active member of Los Angeles society and invested in the future of

the city by amassing extensive real estate holdings. In 1885, he constructed the Nadeau Hotel, corner of 1st and Spring Streets. He was also interested in agriculture; he operated the Nadeau Vineyard, had a brief business venture growing and refining beets, and grew barley in Inglewood. Nadeau Street in Los Angeles was named after him, later renamed East 79th Street.

> *National Register Criteria C: Embodies the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.*
>
> *California Register Criteria 3: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.*

The existing structures situated on the project site lack the necessary integrity and architectural significance to be considered eligible for designation under National Register Criterion C or California Register Criterion 3.

> *National Register Criteria D. It yields, or may be likely to yield, information important in prehistory or history.*
>
> *California Register Criteria 4. Has yielded, or may be likely to yield, information important in prehistory or history.*

The Cartago Boat Landing (Daneri's Landing) (CHPI-INY-006/P-14-005197) is a previously designated California Point of Interest. In addition, the Cartago Boat Landing, the Cartago Station House (P-14-011515), Gomez Homestead (Residence 2) (P-14-011514), and the segment of old carriage road to Gomez Homestead (Residence 2) (P-14-011514) are considered eligible as potential historic sites under National Register Criteria D and California Register 4 for their potential to yield information important in the history and activities of Espitacio Gomez and the Cerro Gordo Freighting Company. The activities of Espitacio Gomez and the Freighting Company encompassed the project site during the period of significance. The project site has a high probability to yield historic period remains and important information associated with the activities of Espitacio Gomez and the Cerro Gordo Freighting Company from 1871 to the early 1880s.

Finally, the property does not contribute to a potential historic district. While there are other ranches from the period of significance located in the area, these ranches are not conjoined and do not collectively rise to the threshold of significance for the creation of a Rural Historic Landscape. Furthermore, the historic setting of the property during the period of significance has been compromised by the recession of Owen's Lake and the industrial activities of the adjacent soda ash plant operating between 1917 and 1930s.

2. ENVIRONMENTAL IMPACTS

a. Methodology

A multi-step methodology was utilized to evaluate the potential impacts of the proposed project on historical resources. The historical resources assessment included archival records searches and literature reviews to determine: if known historical resources have previously been recorded within a one-half mile radius of the

project site; if the project site has been systematically surveyed by historians prior to the initiation of the study; and/or whether there is other information that would indicate whether or not resources on the site or in the immediate vicinity may be historically significant. PCR conducted a records search at the Eastern Information Center (CHRIS-EIC) housed at the University of California, Riverside. This record search included a review of all previous historical resources investigations within a 1/2-mile radius of the Project Site. In addition, the California Points of Historical Interest (PHI), the California Historical Landmarks (CHL), the California Register of Historic Places (California Register), the National Register of Historic Places (National Register), and the California State Historic Resources Inventory (HRI) were reviewed. Site inspections and property history research were conducted to document and assist in assessing potential impacts, if any, from the proposed project. The potential impacts of the proposed project were then analyzed in accordance with Section 15064.5 of the *CEQA Guidelines*.

b. Threshold of Significance

(1) CEQA Guidelines

Appendix G of the *CEQA Guidelines* contains the Initial Study Environmental Checklist form used during preparation of the project Initial Study (contained in **Appendix A** of this EIR). The Initial Study Environmental Checklist questions relating to historical resources have been utilized as the thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if:

- The project causes a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.

A "substantial adverse change in the significance of a historical resource" means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired.[45] The significance of a historical resource is materially impaired when a project:[46]

  - Demolishes or materially alters in an adverse manner those physical characteristics that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
  - Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in a historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
  - Demolishes or materially alters in an adverse manner those physical characteristics that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

[45] *State CEQA Guidelines, 14 CCR Section 15064.5(b)(1).*

[46] *State CEQA Guidelines, 14 CCR Section 15064.5(b)(2).*

The Secretary of the Interior's Standards for Rehabilitation (Standards) are codified at 36 Code of Federal Regulations (CFR) Section 67.7. The Standards are designed to ensure that rehabilitation does not impair the significance of a historic property. In most circumstances, the Standards are relevant in assessing whether there is a substantial adverse change under CEQA. Section 15064.5b(3) of the *CEQA Guidelines* states in part that "…a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historical resource."

Based on the above Appendix G checklist question, the proposed project would have a significant impact on historical resources if:

HIST-1: The project causes a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.

c. Project Features

The Cartago Boat Landing (Daneri's Landing) *(*CHPI-INY-006/P-14-005197) and the Cartago Station House (P-14-011515) are located outside of the impact area and would not be affected by the proposed project. Gomez Homestead (Residence 2) (P-14-011514) and Residence 3 would be demolished under the proposed project. Gomez Homestead (Residence 2) (P-14-011514) contains a squared timber wall which appears to remain from the ca. 1871 cabin likely constructed by Espitacio Gomez. Squared wood timber construction is presently visible only in one interior wall of the residence, although timber construction may exist in the other walls. Gomez Homestead (Residence 2) (P-14-011514) lacks integrity as an architectural resource due to the substantial alterations to the structure; however, the squared timber construction of the extant wall and any other historic fabric associated with the period of significance that may exist inside other walls, roof and floor, have a potential to yield important information about significant historic activities conducted on the site. The property has a high probability for buried subsurface historic period remains associated with the historically significant activities of Espitacio Gomez and the Cerro Gordo Freighting Company from 1871 to the early 1880s. The proposed project would impact one potential historical resource, Gomez Homestead (Residence 2) (P-14-011514), which would be demolished, resulting in the loss of important information pertaining to the property's historical significance. However, demolition monitoring and recordation of the findings by a qualified architectural historian or historical archaeologist would preserve important information about the history of the site and reduce potential impacts to less than significant. The proposed project would therefore result in no adverse impact to historical resources with mitigation incorporated.

d. Analysis of Project Impacts

HIST-1: Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

The proposed project was reviewed by qualified architectural historians and archaeologists, who satisfy the *Secretary of the Interior's Professional Qualification Standards for History, Archaeology, and Architectural History*, pursuant to 36 CFR 61, to determine the significance of potential impacts to the identified historical resources on the project site. As discussed above, the project site has a strong historical association with the

early pattern of development of Inyo County as a center for mining between 1872 and 1900 and ranching between 1862 and 1986. The project site is an example of a rural historic landscape that reflects the local development of the County of Inyo mining and agriculture industry. The property's combination of landscape elements and historic sites (e.g., Cartago Station House (P-14-011515), Cartago Boat Landing (Daneri's Landing) *(*CHPI-INY-006/P-14-005197), Gomez Homestead (Residence 2) (P-14-011514), and associated carriage road) are a rare mix of residential and commercial uses associated with the Espitacio Gomez Ranch and the Cerro Gordo Freighting Company that once operated here on the shores of Owens Lake. The period of significance identified for the project site is ca. 1871 through the early 1880s, beginning with the construction of the Gomez homestead, a squared timber cabin, in 1871 (Gomez Homestead (Residence 2) (P-14-011514); altered), the construction of the circa 1872 Cartago Boat Landing (Daneri's Landing) *(*CHPI-INY-006/P-14-005197) (ruined) and the associated stone Cartago Station House (ruined) (P-14-011515) for the Cerro Gordo Freighting Company and ending with the burning of the steamer the Bessie Brady in 1882 and construction of the railroad in the early 1880s. The Cartago Boat Landing (Daneri's Landing) *(*CHPI-INY-006/P-14-005197) is a previously designated California Point of Interest. Two historic sites, the Cartago Boat Landing (Daneri's Landing) *(*CHPI-INY-006/P-14-005197) and the Cartago Station House (P-14-011515), are considered eligible as potential historical resources under National Register Criteria A, B and D, and California Register Criteria 1, 2 and 4. Gomez Homestead (Residence 2) (P-14-011514) and the associated segment of old carriage road to Gomez Homestead (Residence 2) is considered eligible under National Register Criterion D and California Register Criterion 4 as a potential historic site. The project site has a high probability for buried subsurface historic period remains associated with the activities of the Cerro Gordo Freighting Company from 1871 to the early 1880s. The remaining property improvements lack sufficient age, integrity or significance to be considered eligible as potential historical resources.

3. MITIGATION MEASURES

The demolition of Gomez Homestead (Residence 2) (P-14-011514) would result in a significant impact on a potential historical resource. However, with implementation of mitigation measure HIST-1, which requires demolition monitoring and data recovery, potential impacts would be reduced to a less than significant level because the important historical information that may be contained in the building would be recovered and recorded.

In the event historic period archaeological artifacts are encountered during excavation, mitigation measures HIST-2, -3, -4, and -5 will ensure that these resources receive appropriate preservation treatment.

Mitigation Measure HIST-1: As part of the project, Gomez Homestead (Residence 2) (P-14-011514) will be demolished. Gomez Homestead (Residence 2) (P-14-011514) contains squared timber construction which appears to remain from the ca. 1871 cabin and has a potential to yield important information about significant historic activities conducted on the project site associated with the period of significance, ca. 1871-1883. The squared timber construction of the extant visible wall and any other historic fabric associated with the period of significance that may exist inside other walls, roof and floor of Gomez Homestead (Residence 2) (P-14-011514), have a potential to yield important information about the site. The project applicant shall retain a qualified architectural historian or historical archaeologist to conduct construction monitoring during demolition of Gomez Homestead (Residence 2) (P-14-011514). Any important historic fabric or artifacts associated with the period of significance, ca. 1871-1883, shall be fully recorded in

photographic images and written manuscript notes. Significant material retrieved from the site shall be salvaged, inventoried and properly archived in a suitable publically accessible historical collection for further analysis and interpretation. A qualified architectural historian, historical archaeologist or historic preservation professional who satisfies the *Secretary of the Interior's Professional Qualification Standards for History, Archaeology, or Architectural History* pursuant to 36 CFR 61, shall prepare the necessary written and illustrated documentation in a construction monitoring and data recovery report. This document shall record the history of Gomez Homestead (Residence 2) (P-14-011514) during the period of significance as well document its present physical condition through site plans; historic maps and photographs; sketch maps; 35mm photography; and written data and text. All documentation components shall be completed in accordance with the *Secretary of the Interior's Standards for Historical Documentation.* The completed documentation shall be placed on file at the Eastern Information Center (CHRIS-EIC), University of California, Riverside, CA; the Eastern California Museum; and the County of Inyo Public Library.

Mitigation Measure HIST-2: The Applicant shall retain a qualified archaeological monitor for ground-disturbing activities associated with the proposed project. The frequency of monitoring shall be based on the rate of excavation and grading activities, proximity to known archaeological resources, the materials being excavated (native versus fill soils), and the depth of excavation, and if found, the abundance and type of archaeological resources encountered. Full-time monitoring can be reduced to part-time inspections if determined adequate by the archaeological monitor.

Mitigation Measure HIST-3: In the event that historic period archaeological resources are unearthed during ground-disturbing activities, the archaeological monitor shall be empowered to halt or redirect ground-disturbing activities away from the vicinity of the find so that the find can be evaluated. Work shall be allowed to continue outside of the vicinity of the find. All archaeological resources unearthed by Project construction activities shall be evaluated by the archaeologist. The Applicant shall coordinate with the historic archaeologist and the County to develop an appropriate treatment plan for the resources. Treatment may include implementation of archaeological data recovery excavations to remove the resource or preservation in place. The landowner, in consultation with the historic archaeologist and the County, shall designate repositories in the event that archaeological material is recovered.

Mitigation Measure HIST-4: The archaeological monitor shall prepare a final report at the conclusion of archaeological monitoring. The report shall be submitted by the Applicant to the County, the Eastern Information Center, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the project and required mitigation measures. The report shall include a description of resources unearthed, if any, treatment of the resources, and evaluation of the resources with respect to the California Register of Historical Resources and the National Register of Historic Places.

Mitigation Measure HIST-5: If human remains are encountered unexpectedly during implementation of the proposed project, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to

notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the person(s) thought to be the Most Likely Descendent (MLD). The MLD may, with the permission of the land owner, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The MLD shall complete their inspection and make their recommendation within 48 hours of being granted access by the land owner to inspect the discovery. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Upon the discovery of the Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this mitigation measure, with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.

Whenever the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or the landowner or his or her authorized representative rejects the recommendation of the descendants and the mediation provided for in Subdivision (k) of Section 5097.94, if invoked, fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance.

4. CUMULATIVE IMPACTS

The related projects identified in **Section 3.0,** *Environmental Setting*, of this Draft EIR, would not contribute to the loss of historical resources with a similar historical or architectural context to those of the proposed project. Accordingly, the proposed project's incremental impacts on historical resources, considered together with related projects, would not be cumulatively considerable.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The mitigation measure outlined above would reduce potential impacts to a less than significant level because the important information about Gomez Homestead (Residence 2) (P-14-011514) within the context of the property history during the period of significance would be recovered, interpreted and developed, and filed in an appropriate public archive for future use. After implementation and completion of the mitigation measure, the proposed project would result in no significant impacts to historical resources.

4.0 ENVIRONMENTAL IMPACT ANALYSIS
F. LAND USE AND PLANNING

INTRODUCTION

Development on the project site is guided by policies and regulations set forth in the Inyo County General Plan and the applicable zoning regulations set forth in the Inyo County Code. The provisions set forth in these regulatory documents have been adopted for the purpose of providing orderly development within the County and eliminating or reducing potential land use conflicts as a result of development. This section provides an analysis of the potential impacts of the proposed project with regard to consistency with applicable land use regulations, as well as the compatibility of the proposed project with the surrounding uses in the area. Secondary environmental effects caused as a result of the land use relationships analyzed in this section are addressed in other sections of this Draft EIR.

1. ENVIRONMENTAL SETTING

a. Regulatory Framework

The following discussion identifies and generally describes the regulatory plans and policies and ordinances that would be applicable to development at the site of the proposed project.

(1) Inyo County General Plan

(a) General Plan Goals and Policies

California state law requires that every county and city prepare and adopt a long-range comprehensive General Plan to guide future development and to identify the community's environmental, social, and economic goals. The General Plan must: (1) identify the need and methods for coordinating community development activities among all units of government; (2) establish the community's capacity to respond to problems and opportunities; and (3) provide a basis for subsequent planning efforts. The Inyo County General Plan sets forth goals, objectives, policies, and implementation measures to provide a guideline for day-to-day land use policies and to meet the existing and future needs and desires of the County, while integrating a range of state-mandated elements including Land Use, Circulation, Housing, Conservation, Open Space, Noise, and Safety.

Within these elements, the General Plan sets forth goals to guide development within the County. Each goal is supported by a series of policies to further the objective(s) of each goal. Goal and policies relevant to the proposed project are listed and analyzed for project consistency in **Table 4.F-1**, *Comparison of the Project to Applicable Policies of the Inyo County General Plan*, in the Impacts Analysis subsection below.

(b) General Plan Land Use Designation

As shown in **Figure 4.F-1**, *General Plan Land Use Designation***,** the project site is designated for Rural Protection (RP) and Rural Residential High Density (RRH) land uses in the Inyo County General Plan Land Use Element.

The RP land use designation applies to land or water areas that are essentially unimproved and planned to remain open in character, provides for the preservation of natural resources, the managed production of resources, low intensity agriculture including grazing, park and other low-intensity recreation, wildlife refuges, hunting and fishing preserves, horse stables, cemeteries, greenbelts and similar and compatible uses. The minimum parcel size is generally 40 acres. Residential use is limited to one single-family home per 40-acre or larger parcel. Approximately 402 acres of the project site are designated for RP uses.

The RRH land use designation provides for large-lot single-family housing in rural residential neighborhoods, public and quasi-public uses, and similar and compatible uses. Residential densities are limited to a maximum of 1 dwelling unit per acre, with a minimum parcel size of 1.0 acre. This designation is generally applied on the fringes of urban communities where large parcel sizes are preferred, and for those rural communities that lack complete sewer and water systems. Individual water wells and individual sewage disposal systems are allowed, but community water systems are encouraged. The undeveloped residential subdivision encompassing 16 lots and totaling 17.90 acres, in the northeastern corner portion of the project site, is designated for RRH land uses.

As discussed in detail below, the proposed project would seek a General Plan Amendment to apply the Light Industrial (LI) General Plan land use designation to a 23.46-acre portion of Cabin Bar Ranch. The LI designation allows for industrial parks, warehousing, light manufacturing, public and quasi-public uses, and similar and compatible uses where there are no significant air, odor, water, visual or hazard issues. The standard floor-to-area (FAR) ratio for the LI land use designation is 0.50, but may be increased under certain circumstances with a Conditional Use Permit (CUP) up to an FAR of 1.20.

(2) Inyo County Code

Title 18 (Zoning Code) of the Inyo County Code defines the range of zoning classifications throughout the County and provides the specific permitted uses applicable to each designation. The Zoning Code is cumulative under most zoning categories, so that lesser intensity uses are allowed in higher intensity zones. For example, single-family uses are permitted in multi-family zones and multi-family uses are permitted in commercial zones.

As shown in **Figure 4.F-2,** *Zoning Designation,* the majority of Cabin Bar Ranch, approximately 407 acres, is zoned OS-40 (Open Space, 40-Acre Minimum). The purpose of the OS zone is to provide for those areas designated as open space in the County General Plan as to encourage the protection of mountainous, hilly upland, valley, agricultural, potential agricultural, fragile desert areas, and other mandated lands from fire, erosion, soil destruction, pollution and other detrimental effects of intensive land use activities. The OS zone also seeks to establish standards for land uses that will protect and preserve the environmental resources, scenic, natural features, and open space character of the County, while also providing for agricultural development and protection of existing agricultural areas from urban development or residential subdivision.

As detailed in Chapter 18.12 of the Inyo County Code, the principal permitted uses in the OS-40 zone are single-family dwelling units, farms and ranches for orchards, livestock ranches for raising and grazing animals, animal hospitals and kennels, wildlife refuges and hunting or fishing preserves, and wilderness areas. Accessory uses permitted within the OS zone include dwellings of persons regularly employed on the premises, private garages or other storage areas, home occupations, guesthouses, signs and advertising, and

PCR

N

0 1320 Feet

General Plan Land Use Designations

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: Triad/Holmes Associates, 2011.

FIGURE

4.F-1

PCR

N

0 1320 Feet

Inyo County Zoning Designation

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: Triad/Holmes Associates, 2011.

FIGURE

4.F-2

roadside stands. The OS zoning designation also establishes development standards for these uses, such as the maximum permitted building height, setbacks, and distance between buildings on the same parcel.

An approximately 17.90-acre area of Cabin Bar Ranch was subdivided in 1982 into 16 lots and zoned RR-1.0 (Rural Residential, one-acre minimum) to permit the development of single-family homes. The purpose of the RR zone is to provide suitable areas and appropriate environments for low density, single-family rural residential and estate type uses where certain agricultural activities can be successfully maintained in conjunction with residential uses on relatively large parcels. As detailed in Chapter 18.21 of the Inyo County Code, the principal permitted uses in a RR zone are single-family dwelling units, including single-family mobile homes, and orchards, vegetable crops, nurseries and gardens. Accessory uses permitted within the RR zone include private garages or other structures used for storage of equipment, home occupations, signs and advertising, guest house or cottage, animal maintenance, rooming and boarding of not more than three persons, and other uses customarily appurtenant to the permitted use. Conditional uses permitted in the RR zoning designation includes, but is not limited to, social halls, lodges, fraternal organizations, community clubs, private noncommercial recreational facilities, residential care facilities, and nursery schools. Further, the RR zoning designation establishes development standards for these uses, such as the maximum permitted building height, setbacks, and distance between buildings on the same parcel.

The project proposes a Zone Change to rezone a 23.46-acre portion of Cabin Bar Ranch to the M-2 (Light Industrial) zoning classification. Of this, 11.04 acres are currently zoned RR-1.0 and 12.42 acres are currently zoned OS-40. The M-2 zone identifies suitable and appropriate areas for light, less intense, and small-scale manufacturing activities which normally take place within enclosed buildings. As detailed in Chapter 18.56 of the Inyo County Code, the principal permitted uses in the M-2 zone are: agricultural uses; all types of manufacture, processing, treatment or assembly of products other than those which may be obnoxious or offensive by reason of odor, dust, smoke, noise or other similar causes including mineral processing or ore stockpiling; wholesale business; furniture manufacture; trucking terminal; laboratory, wood lot; and public or quasi-public buildings. Accessory uses permitted in the M-2 zone include, but are not limited to, accessory buildings and uses customarily incidental to any permitted use; one dwelling when occupied solely by a caretaker or watchman and his family; emergency housing; and signs and advertising for permitted, accessory or conditional uses. Conditional uses permitted in the M-2 zone include, but are not limited to: petroleum products storage; junkyards; race tracks; bottling plants including retail and wholesale establishments for the distribution of bottled products manufactured or produced by the industry on the same site; various types of signage; and FAR increases.

The balance of the project site, approximately 10.95 acres, would be zoned OS-40. Of this, 6.86 acres are currently zoned RR-1.0 and are part of the unrealized residential subdivision, including all or portions of several undeveloped residential lots. These lots would be merged or extinguished as part of the proposed project, and a Zone Change is proposed to the OS-40 zoning classification. The remainder of the 10.95-acre area is already designated OS-40.

(3) Air Quality Management Plan

The project site and the surrounding area are located in the 13,975-square-mile Great Basin Valleys Air Basin (the "Basin"), and specifically within the Owens Valley Planning Area (OVPA). Particulate matter, primarily in the form of wind-blown dust, is a large source of air pollution in the OVPA. Specifically, strong winds over the lakebed of the Owens Dry Lake blow high levels of dust into the air containing a variety of

particulate matter. The result of this wind-blown particulate matter is that the OVPA does not meet attainment status for the criteria pollutant particulate matter less than 10 microns in diameter (PM_{10}). The Owens Dry Lake, adjacent to the overall Cabin Bar Ranch, is the predominant source of PM_{10} in the OVPA. The Great Basin Unified Air Pollution Control District (GBUAPCD) is required, pursuant to the federal and state Clean Air Act(s), to reduce emissions of criteria pollutants for which the OVPA is in non-attainment (i.e., PM_{10}). In response to this mandate, the GBUAPCD adopted the 2008 Owens Valley PM_{10} Planning Area Demonstration of Attainment State Implementation Plan (SIP) to reduce levels of PM_{10} in the OVPA. The project's consistency with the GBUAPCD SIP is addressed in detail in **Section 4.B-1,** *Air Quality*, of this Draft EIR.

(4) Owens Lake Master Use Plan

Cabin Bar Ranch is bordered on the east by the shoreline of Owens Dry Lake, which has largely dried up as a result of water conveyance from the Owens River through the Los Angeles Aqueduct. As mentioned above, during windy days, the largely dry lakebed is a prominent source of airborne dust. The dry lakebed also reduces the quantity and quality of wildlife habitat in the region. To mitigate these conditions, the Los Angeles Department of Water and Power (LADWP) is currently implementing Best Available Control Measures (BACM) and is in the early process of developing a "Master Use Plan" for the Owens dry lakebed, which would incorporate the goals and policies of previous management plans into one document with broadly supported goals and objectives to enhance the Owens Lakebed with respect to dust mitigation, habitat and wildlife, water efficiency methods, and potential renewable energy development. A diverse group of interest groups are working together to reach consensus on a final plan in early 2012. The project's consistency with the Owens Lake Master Plan is discussed in detail in **Section 4.C, Biological Resources**, of this Draft EIR.

(5) Owens Lake Habitat Management Plan

Pending approval of the above-mentioned LADWP Owens Lake Master Use Plan, the Owens Lake Habitat Management Plan is the guiding document for restoring habitat in the Owens Dry Lakebed. Adopted in March 2010, the Habitat Management Plan provides policies for the Owens Lake Dust Mitigation Project. The Habitat Management Plan was a requirement of Mitigation Measure "Biology-14" of the 2008 SIP discussed above and applies to all areas subject to dust control measures on lands owned by either the City of Los Angeles or the California State Lands Commission. The Habitat Management Plan recognizes that implementation of water-based dust control inadvertently created habitat opportunities for wildlife that were previously not present. Further, the Plan serves as a guide for compatibility between construction, maintenance, and operational needs of the 2008 SIP, and the needs of resident and migratory wildlife resources utilizing the Owens Lake Dust Control Area. The project's consistency with the Habitat Management Plan is discussed in detail in **Section 4.C, Biological Resources**, of this Draft EIR.

b. Existing Conditions

(1) Existing General Plan Designation & Zoning

As previously discussed, the project site is designated for Rural Protection (RP) and Rural Residential High Density (RRH) land uses in the Inyo County General Plan Land Use Element. Similarly, the majority of Cabin Bar Ranch, approximately 407 acres, is zoned OS-40 (Open Space, 40-acre minimum) in the Inyo County Code. A 12.43-acre area in the north-central portion of Cabin Bar Ranch, was previously subdivided into 16

lots and zoned RR-1.0 (Rural Residential, One-Acre Minimum) to permit the development of single-family homes.

(2) Existing Development

The project area is generally rural in nature and contains large areas of undeveloped publicly-owned open space. Development in the project vicinity is limited to low-density residential and commercial uses in Cartago north of the project site, the pending US 395 roadway alignment, and the existing Crystal Geyser bottling facility to the south in Olancha. In addition, a remnant soda ash pile is located northeast of the project site, just east of the town of Cartago. Existing development on the project site and surrounding vicinity is described in detail below.

(a) Existing On-Site Conditions

As described in detail in **Section II, Project Description**, of this Draft EIR, previous uses on Cabin Bar Ranch include cattle ranching and agricultural operations and an undeveloped 12.43-acre subdivision. Remaining on-site buildings and structures include two vacant single-family homes, a former model home built as part of the unrealized residential development, a mobile home currently occupied by a caretaker, and a barn. Other improvements include a man-made irrigation pond, several empty concrete-lined pond basins remaining from the unrealized development, two fenced pasture areas, and Cabin Bar Ranch Road, the primary access road for the project site from US 395.

Sewer and water lines currently exist beneath Cabin Bar Ranch Road, as well as electrical and telephone lines. The water, electrical, and telephone lines are connected to the existing model home. The sewer line under the existing Cabin Bar Ranch Road was designed to flow east under the force of gravity to a pump station south of the cul-de-sac, which would have then pumped to a leach field located south of the subdivision. However, this sewer line was never connected and wastewater from the model home is treated by an individual septic system located on the same parcel as the home.

Cartago Creek flows intermittently across the ranch, approximately 1,000 feet south of the northern property line. Nine known springs are located on the ranch, their locations indicated by the presence of a former irrigation ditch that runs parallel to US 395. Four existing wells are located on the portion of Cabin Bar Ranch east of US 395, including three production wells and one domestic well. The production wells (CGR-8, CGR-9, and CGR-10) were drilled by CGR and are located roughly in the center of the ranch. The domestic well (CBR-1), located west of the man-made irrigation pond, was drilled in the 1980s to provide domestic water for the proposed residential subdivision.

(b) Surrounding Uses

The proposed 43.24-acre project site is located on the approximately 420-acre Cabin Bar Ranch, which is located south of the unincorporated town of Cartago, Inyo County, California. Cabin Bar Ranch is predominantly open space and rural in nature, as is the surrounding area. Development in the project vicinity is largely concentrated in the town of Cartago north of the project site and at Crystal Geyser's existing bottling plant operation approximately 0.75 miles to the south, in Olancha.

With respect to Cartago, the unincorporated town has a population of approximately 92 residents and contains a mix of rural single-family residential and mobile homes, limited low-density commercial

development (some abandoned), and the remnants of a soda ash processing plant that ceased operations in the 1930s. The remnants of the soda ash processing plant include several abandoned structures and a soda ash pile. With the exception of several parcels adjacent to US 395 that are zoned C-2 (Highway Services and Tourist Commercial), the majority of Cartago is zoned RMH (Single Residence and Mobile Home Combined District), which is intended to protect established neighborhoods of one-family dwellings (including mobile homes) and to provide space in suitable locations for additional development of this kind, with appropriate community facilities.

As discussed above, Cabin Bar Ranch is bordered on the east by the western shoreline of Owens Dry Lake, which has largely dried up as a result of water conveyance from the Owens River through the Los Angeles Aqueduct. Although the lakebed is largely dry, the lake's southwestern shoreline near the project site contains stands of vegetation and shallow ponds that support wildlife. The California Department of Fish and Game(CDFG) Cartago Wildlife Area is located northeast of the project site, immediately east of the soda ash processing plant remnants, where old dikes extend into the Owens Dry Lake, encircling ponds which were once used as soda evaporators. These ponds contain 218 acres of fresh water in the form of wetlands and springs and provide habitat for water fowl, wading birds and shorebirds. In addition to habitat, this area provides opportunities for bird watching, photography, and the hunting of non-protected water fowl, dove, quail, and rabbits. Owens Dry Lake has been designated a Nationally Significant Important Bird Area by the National Audubon Society and America Bird Conservancy.

Cabin Bar Ranch is bordered on the south by undeveloped, privately owned land known as the Elton Lease Parcel, and the parcel immediately south this parcel is developed with CGR's existing spring water bottling plant in the unincorporated community of Olancha, approximately 0.75 miles south of the project site. Water rights associated with the Elton Lease Parcel are leased to CGR and four on-site wells (CGR-2, CGR-3, CGR-4, and CGR-7) and associated piping supply CGR's Olancha bottling facility. Well EW-4 is also currently pumped; the remaining wells on the Elton Lease Parcel are unused. All other structures were removed from the Elton Lease Parcel as part of the conditions of the CGR lease to avoid potential groundwater contamination.

Located to the west of the project site, across US 395, is the undeveloped, non-contiguous portion of Cabin Bar Ranch, a Southern Pacific Railroad easement, the Los Angeles Aqueduct, and the eastern escarpment of the Sierra Nevada Mountain Range, the base of which is approximately one mile west of Cabin Bar Ranch.

2. ENVIRONMENTAL IMPACTS

a. Threshold of Significance

Appendix G of the *CEQA Guidelines* contains the Initial Study Environmental Checklist form used during preparation of the project Initial Study (contained in **Appendix A** of this EIR). The Initial Study Environmental Checklist questions relating to land use have been utilized as the thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it:

LU-1 Conflicts with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

The remaining Environmental Checklist Questions pertaining to Land Use address the physical division of an established community, and conflicts with a habitat conservation plan or natural community conservation plan. The Initial Study determined that the project would result in No Impact in response to the question addressing division of an established community, and no further analysis would be required in the Draft EIR. The Initial Study determination is briefly summarized in **Section 6.0,** *Other Environmental Considerations* (subsection C, Effects Found Not to be Significant), in this Draft EIR. The project's potential to impact habitat conservation plans and natural community conservation plans is discussed in **Section 4.C,** *Biological Resources*, of this Draft EIR.

b. Methodology

The analysis of potential land use impacts considers consistency of the project with adopted plans and policies that regulate land use on the project site, as well as the compatibility of proposed uses with surrounding land uses. The determination of consistency with applicable land use policies and ordinances is based upon a review of the previously identified planning documents that regulate land use or guide land use decisions pertaining to the project site (i.e., the Inyo County General Plan and Inyo County Code). CEQA Guidelines Section 15125(d) requires that an EIR discuss inconsistencies with applicable plans that the decision-makers should address. Evaluations are made as to whether a project is inconsistent with such plans. Projects are considered consistent with regulatory plans if they are compatible with the general intent of the plans and would not preclude the attainment of their primary goals. The intention of the evaluation of consistency with regulatory plans is to determine if non-compliance would result in a significant physical impact.

The intent of the compatibility analysis is to determine whether the project would be compatible in relation to use, size, intensity, density, scale, and other physical and operational factors of the project vicinity. The compatibility analysis is based on aerial views of the project site and surrounding vicinity, land use maps, and field surveys in which surrounding uses have been identified and characterized. The analysis addresses general land use relationships and urban form, based on a comparison between land use relationships in the project area under existing conditions and conditions following project implementation.

c. Project Features

As described in **Section II, Project Description**, of this Draft EIR, the project proposes a spring water bottling facility and ancillary uses on a portion of the 420-acre Cabin Bar Ranch. The water bottling facility would be located in the north-central portion of Cabin Bar Ranch and would include an approximately 198,500-square-foot bottling plant and an approximately 40,000-square-foot storage warehouse. Ancillary uses to the bottling facility would include a rooftop solar photovoltaic array, fire suppression building, proposed stormwater retention basin, leach mound system, fire access road, and parking and truck staging area. The warehouse would be located south of the bottling facility, across the proposed fire access road. To provide adequate access from US 395 to the bottling facility, the project would remove the site's existing access road (i.e., Cabin Bar Ranch Road) and construct a new permanent access road approximately 2,500 feet to the south. As shown in **Figure 2-4**, *Project Site Plan*, proposed project development would be located in the north-central portion of Cabin Bar Ranch.

To accommodate the proposed project, 23.46 acres of the Cabin Bar Ranch property would be rezoned to the M-2 (Light Industrial) zoning designation. In association with this Zone Change, a General Plan amendment

would be sought to apply the Light Industrial General Plan land use designation to this portion of Cabin Bar Ranch. The M-2 zone allows a bottling plant as a conditional use. Accordingly, a CUP is requested as part of the proposed project.

The remainder of the project site (approximately 10.95 acres) would not be developed and would be designated for RP (Rural Protection) uses and zoned OS-40. This would necessitate a General Plan Amendment and Zone Change for 6.86 acres currently designated as RRH (Rural Residential High Density) and zoned RR-1.0 (Rural Residential, One-Acre Minimum.) As described in **Section II, Project Description**, of this Draft EIR, anticipated land use approvals for the proposed project include the following:

- General Plan Amendment for Land Use Designation Changes
- Zone Reclassification for Zone Changes
- General Plan Amendment for Land Use Designation Changes
- Zone Reclassification for Zone Changes from OS-40 and RR-1.0 to M-2
- Conditional Use Permit for a proposed water bottling facility within the Light Industrial (M-2) zone
- Lot Line Adjustment (LLA) process to create the 34.2-acre project site from the overall 420-acre Cabin Bar Ranch property
- Parcel merger for all residential parcels, likely through a Reversion to Acreage process or a lot merger and road abandonment

d. Analysis of Project Impacts

LU-1 Would the proposed project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect?

The development of the proposed project would be subject to the goals and policies outlined in the Inyo County General Plan and the development regulations set forth in the Inyo County Code. The consistency of the proposed project with these policies and regulations are addressed below.

(1) Inyo County General Plan

As discussed above, the Inyo County General Plan establishes goals to guide development within the County. Each goal is supported by a series of policies to further the objective(s) of each goal. Goal and policies relevant to the proposed project are listed and analyzed for project consistency in **Table 4.F-1**, *Comparison of the Project to Applicable Policies of the Inyo County General Plan*, below. As shown therein, the proposed project would be consistent with the applicable goals and policies of the Inyo County General Plan and a less than significant impact would result. Goals and policies not applicable to the proposed project are not included in the table.

With respect to land use designations, as discussed above, the project site is designated for Rural Protection (RP) and Rural Residential High Density (RRH) land uses in the Inyo County General Plan Land Use Element.

Table 4.F-1

Comparison of the Project to Applicable Policies of the Inyo County General Plan

Recommendation	Analysis of Proposed Project Consistency
Land Use Element	
Goal LU-1: Create opportunities for the reasonable expansion of communities in a logical and contiguous manner that minimizes environmental impacts, minimizes public infrastructure and service costs, and furthers the countywide economic development goals. Guide high-density population growth to those areas where services (community water and sewer systems, schools, commercial centers, etc.) are available or can be created through new land development, while providing and protecting open space areas.	**Consistent.** The proposed project would be constructed in a portion of Inyo County which contains a nearby water bottling facility of similar size, scale, and design. The proposed bottling facility would utilize the existing LADWP electricity distribution system and a rooftop solar photovoltaic array to meet energy demands and would rely on on-site facilities to provide water and wastewater disposal from the on-site operations. As discussed **in Section 4.I, Transportation**, of this Draft EIR, the proposed project would be accessed by the existing US 395 and would result in a less than significant impact with respect to roadways and intersection within Inyo County. As discussed in **Section 4.C, Biological Resources**, of this Draft EIR, the proposed project would result in a less than significant impact with respect to biological resources on the project site and project vicinity. The remainder of the 420-acre Cabin Bar Ranch would remain undeveloped open space.
Policy LU-1.15. Buffers: As part of new development review, the County shall require that residential development/ districts are protected from non-residential uses by use of buffers or other devices. Landscaping, walls, building/facility placement, and other similar aesthetically pleasing devices are acceptable for this purpose. This does not include residential in mixed-use designations.	**Consistent.** As discussed in **Section 4.A, Aesthetics**, of this Draft EIR, the project would retain existing vegetation along the project site's northern boundary to visually screen the bottling facility from residences in Cartago. In addition, the proposed bottling facility would be located south of the remnant soda ash pile, approximately 300 feet from the closest residence in Cartago, with intervening existing vegetation and open space. Further, by: (a) relocating the access road approximately 2,500 feet south of its existing location, (b) locating truck operations to the back (east) side of the proposed building, and (c) locating exterior noise-generating machinery on the south side of the bottling plant, the proposed project would locate noise-generating uses away from residential uses in Cartago.
Goal LU-4: Provide appropriate types of industrial land uses that adequately serve the existing and/or future needs of the community and surrounding environs, and to promote and attract forms of non-polluting light industry.	**Consistent.** The project proposes a water bottling facility, which is inherently a light, non-polluting industry type. The proposed bottling facility would meet the future needs of the community by providing additional employment opportunities and revenue for Inyo County in an industry type already established in the project vicinity.
Policy LU 4.1. Light Industrial Designation: This designation provides for industrial parks, warehousing, light manufacturing, public and quasi-public uses, and similar and compatible uses where there are no significant air, odor, water, visual or hazard issues. The FAR [floor area ratio] shall not exceed 0.50 (The FAR can be up to 1.2 under a conditional use permit).	**Consistent.** The project proposes a water bottling facility, which is inherently a light, non-polluting industry type. As discussed throughout this Draft EIR, the proposed project would not result in significant impacts with respect to air or odor (refer to **Section 4.B 1, Air Quality**), water (refer to **Section 4.G, Hydrology**), visual (refer to **Section 4.A, Aesthetics**), or hazard (refer to the Initial Study provided in **Appendix A**) issues. Since Cabin Bar Ranch is approximately 420 acres in size, the proposed project would be well within the 0.50 FAR allowed under the LI land use designation.

Table 4.F-1

Comparison of the Project to Applicable Policies of the Inyo County General Plan

Recommendation	Analysis of Proposed Project Consistency
Policy LU-4.3. Adequate Water and Sewer Facilities: The County shall require industrial sites to be served with adequate water service and sewage disposal facilities. Certain industrial developments may need to provide on-site secondary level treatment of the generated sewage or connect to an existing sewage treatment plant depending on the amount of sewage generated and the density of the development. There are certain industrial wastes that are not compatible with sewage wastes, therefore some industrial facilities may need to provide separate treatment and disposal facilities for any generated waste.	**Consistent.** As discussed in **Section 4.G, Hydrology**, of this Draft EIR, the three on-site production wells and one on-site domestic well would be adequate to serve the project without significantly impacting the groundwater table, production potential, or water quality of the groundwater aquifer supporting the project site and surrounding vicinity. All project-generated wastewater would be treated on-site by both a leach mound system and a stormwater retention basin. Only small quantities of pH-balanced rinse water from filter cleaning operations would be conveyed to the stormwater retention basin. All other domestic wastewater would be treated by the on-site leach mound system. The stormwater retention basin would be reviewed and permitted by the Lahontan Regional Water Quality Control Board (LRWQCB) prior to installation, while the leach mound system would be reviewed and permitted by Inyo County Environmental Health Department prior to installation.
Policy LU-4.4. Pollution Standards: The County shall require that all industrial uses use the most recent air, water, and noise pollution standards.	**Consistent.** The project proposes a water bottling facility, which is inherently a light, non-polluting industry type. The proposed bottling plant would be designed with the most recent pollution standards, including seeking a Leadership in Energy and Environmental Design (LEED) certification. As a key component of this certification, the project would implement a rooftop solar array and a recycling program similar to that implemented at the nearby Crystal Geyser plant in Olancha. As discussed in **Section 4.B-1, Air Quality**, of this Draft EIR, the proposed project would result in a less than significant impact with respect to air quality. With respect to noise, as discussed above, the project would locate noise-generating activities on portions of the project site away from residential uses in Cartago, with the nearest residence approximately 300 feet from the site of proposed construction and the nearest project building. As concluded in **Section 4.H, Noise**, of this Draft EIR, the project would result in less than significant noise impacts. Lastly, as discussed above and concluded in **Section 4.G, Hydrology**, of this Draft EIR, the proposed project would be adequately supported by the underlying groundwater aquifer.
Policy LU-4.5. Residential and Commercial Uses: The County shall permit residential uses within an industrial classified area only for caretaker or superintendent of the enterprise. Commercial uses similar in character to the industrial use, particularly the Heavy Commercial uses, may be compatible in industrial designations.	**Consistent.** The existing on-site residential uses (i.e., the model home used by visiting CGR employees and the caretaker's residence) would remain on Cabin Bar Ranch and would continue in use; however, these uses would not be located within the portion of the ranch that would be rezoned to the M-2 (Light Industrial) zoning designation.

Table 4.F-1

Comparison of the Project to Applicable Policies of the Inyo County General Plan

Recommendation	Analysis of Proposed Project Consistency
Policy LU-4.6. Circulation and Safety: The County shall give high priority to maintaining traffic safety and a safe circulation pattern for all industrial uses. For residential areas, the County shall require that industrial related traffic is routed out and away from residential neighborhoods.	**Consistent.** As discussed in **Section 4.I, Transportation**, of this Draft EIR, the project would not result in unsafe conditions along US 395 at the project's proposed access point. The proposed project would provide adequate acceleration/deceleration and turning lanes to accommodate vehicles entering US 395 from the project site. Additionally, adequate sight and cornering distance would be provided along US 395 at the proposed site access point. Further, 99 percent of project truck travel would to/from the south of the project site and would not travel through the town of Cartago.
Policy LU-4.7. Access and Parking: The County shall require industrial development to have direct vehicle access to a publicly maintained roadway. The industrial site itself should be designed with adequate parking and loading areas. Visitor parking should be situated where it is safe and does not interfere with the operation of the facility.	**Consistent.** The project would be directly accessed by US 395, a regional roadway maintained by the California Department of Transportation (Caltrans). Twenty-five (25) on-site parking spaces are proposed for employees and visitors, and would be located adjacent to the back (east) side of the bottling facility. This area would also include the paved loading and delivery docks for trucks, creating one large area that would provide adequate space for parking and vehicle operations.
Policy LU-4.9. Landscaping: The County shall require landscaping to screen industrial uses where necessary.	**Consistent.** As discussed in **Section 4.A, Aesthetics**, of this Draft EIR, the project would retain the existing vegetation along the northern side of the project site and along US 395. This vegetation would visually screen the bottling facility from the residences of Cartago and motorists traveling along US 395.
Goal LU-5: Provide adequate public facilities and services for the existing and/or future needs of communities and their surrounding environs, and to conserve natural and managed resources.	**Consistent.** As discussed above, the electrical demands of the proposed project would be adequately served by the existing LADWP infrastructure. As discussed above, the on-site wells would be adequate to serve the project without significantly impacting the groundwater table, production potential, or water quality of the groundwater aquifer supporting the project site and surrounding vicinity. The project would not be connected to a public sewer system and all wastewater would be treated on-site by an adequately sized leach mound system and stormwater retention basin that would be approved by the County and LRWQCB. As discussed in **Section 4.C, Biological Resources**, of this Draft EIR, the proposed project would result in a less than significant impact with respect to biological resources. The project would conserve natural resources by implementing a rooftop solar photovoltaic array to reduce energy consumption and a comprehensive recycling program to reduce solid waste generated on the project site. Lastly, as concluded in the Initial Study prepared for this project (**Appendix A** of this Draft EIR), the project would result in less than significant impacts on public services, such as fire, police, schools, parks, and recreation.

Table 4.F-1

Comparison of the Project to Applicable Policies of the Inyo County General Plan

Recommendation	Analysis of Proposed Project Consistency
Policy PSU-1.2. On-Site Infrastructure: The County shall require all new development, including major modifications to existing development, to construct necessary on-site infrastructure to serve the project in accordance with County standards.	**Consistent.** As mentioned above, the project's electricity demands would be adequately served by the existing LADWP infrastructure. All other infrastructure would be served by on-site facilities (e.g., on-site wells, leach mound and septic system, stormwater retention basin) that would be adequately sized for the project and would be reviewed by the LRWQCB and County prior to their installation. Further, as discussed throughout this Draft EIR, the proposed project would provide an internal access road and associated roadway improvements along US 395 to support project operations.
Policy PSU-1.3. Facilities and Services for New Industrial Development: The County shall require new industrial development to be served by community sewer, stormwater, and water systems where such systems are available or can feasibly be provided.	**Consistent.** As discussed above, there is no community water, wastewater, or stormwater system available to serve the proposed project. Project water demand would be adequately met by three on-site production wells and one on-site domestic well. All wastewater and stormwater would be treated on-site by both a leach mound system and a stormwater retention basin. As discussed throughout this Draft EIR, these systems would be adequately sized to serve the proposed project and would be reviewed and permitted by the LRWQCB and County prior to their installation.
Policy PSU-1.5. Review for Land Use Changes: When reviewing applications for land use designation changes (i.e. zone change, General Plan Amendment, specific plan amendment), the County shall thoroughly analyze the impacts of the proposed changes on all aspects of the infrastructure system within the County, and require mitigation as appropriate. This shall include consultation with service providers who have infrastructure within the County.	**Consistent.** The project would request a zoning reclassification, a General Plan amendment, and a CUP. This Draft EIR and associated technical reports constitute a detailed analysis of the project's impacts on infrastructure in the County. As discussed throughout this Draft EIR, the project would result in less than significant environmental impacts with the implementation of identified mitigation measures. As discussed in the Initial Study (**Appendix A** of this Draft EIR), the LADWP would have adequate capacity to serve the project site. All other utilities would be provided by adequately sized on-site facilities. As discussed in **Section 4.1, Transportation**, the proposed project would also result in a less than significant impact to the transportation infrastructure in Inyo County.
Goal PSU-4: To ensure adequate wastewater collection, treatment, and disposal.	**Consistent.** As discussed throughout this Draft EIR, project wastewater would be treated by an on-site leach mound system and stormwater retention basin. These features would be adequately sized to serve the project and would be reviewed and permitted by the LRWQCB and the County prior to installation.
Policy PSU-4.4. Permitting Individual On-Site Systems: The County shall permit individual on-site sewage disposal systems on parcels that have the area, soils, and other characteristics that permit installation of such disposal facilities without threatening surface or groundwater quality or posing any other health hazards and where community sewer service is not available and cannot be feasibly provided.	**Consistent.** As discussed throughout this Draft EIR, no public wastewater treatment infrastructure is available to serve the project site. Thus, the project would be served by an on-site leach mound system and stormwater retention basin. The features have been adequately sized to serve the project and would be reviewed and permitted by the LRWQCB and the County prior to construction. When considering impacts on groundwater, it is important to consider that the project relies on high-quality groundwater for a successful business, and on-site features have been designed to maintain groundwater quality.

Table 4.F-1

Comparison of the Project to Applicable Policies of the Inyo County General Plan

Recommendation	Analysis of Proposed Project Consistency
Goal PSU-5: To collect and dispose of stormwater in a matter that minimizes inconvenience to the public, minimizes potential water-related damage, and enhances the environment.	**Consistent.** As discussed throughout this Draft EIR, on-site stormwater would be accommodated by a stormwater retention basin. The stormwater basin would be designed to maintain existing stormwater flow patterns across the project site, in that stormwater would be collected from west of the basin and conveyed downslope (east) towards Owens Dry Lake. In accordance with applicable LRWQCB standards, the retention basin would be designed so that no net increase in stormwater flow results from the project site following completion of the project. Specifically, the stormwater retention basin would be designed to retain a storm event producing approximately 0.47 inch of precipitation and would be protected with rip-rap or another material designed to create sheet flow and eliminate the possibility of erosion at the detention basin outflow. As discussed in **Section 4.G, Hydrology**, of this Draft EIR, the project would result in a less than significant with respect to stormwater drainage and surface water flows.
Policy PSU-5.1. Project Design: The County shall encourage project designs that minimize drainage concentrations and coverage by impermeable surfaces.	**Consistent.** As discussed above, the proposed project would include a stormwater retention basin adequately sized to normalize any change in on-site stormwater flows as a result of the proposed project. Specifically, the stormwater retention basin would be designed to retain a storm event producing approximately 0.47 inches of precipitation and would be protected with rip-rap or another material designed to receive and retain sheet flow and eliminate the possibility of erosion at the detention basin outflow. The stormwater retention basin would be reviewed and permitted by the LRWQCB and County prior to construction.
Policy PSU-5.2. Maintenance: The County shall require the maintenance of all drainage facilities, including detention basins and both natural and manmade channels, to ensure that their full carrying capacity is not impaired.	**Consistent.** As discussed above, the proposed stormwater retention basin would be reviewed and permitted by the LAWQCB and the County prior to its construction. As is standard practice, it is anticipated that the LRWQCB would require ongoing maintenance and occasional inspection of the stormwater retention basin to ensure continued optimal function.
Policy PSU-5.6. Drainage System Requirements: Future drainage system requirements shall comply with applicable state and federal non-point source pollutant discharge requirements.	**Consistent.** As discussed above, the project's proposed stormwater retention basin would be designed in accordance with all applicable regulations, and would be reviewed and permitted by the LRWQCB and County prior to its installation.
Goal PSU-6: To ensure the safe and efficient disposal or recycling of solid waste generated in Inyo County.	**Consistent.** As discussed in the project's Initial Study (**Appendix A** of this Draft EIR), solid waste generated by the proposed project would be adequately accommodated by the Lone Pine Landfill. In addition, the proposed project would employ recycling and conservation programs similar to those that occur at the nearby Olancha Crystal Geyser spring water bottling plant as a part of its regular operations, including programs for cardboard, wood pallets, PET preforms (which are plastic forms that are blown into bottles), and other plastics.
Policy PSU-6.1. Solid Waste Reduction and Recycling: The County shall promote maximum use of solid waste reduction, recycling, composting, and environmentally safe transformation of wastes.	**Consistent.** As discussed above, the proposed project would employ recycling and conservation programs similar to those that occur at the nearby Olancha Crystal Geyser spring water bottling plant.

Table 4.F-1

Comparison of the Project to Applicable Policies of the Inyo County General Plan

Recommendation	Analysis of Proposed Project Consistency
Policy PSU-6.3. Recycled Products: The County shall encourage businesses to use recycled products in their manufacturing processes and consumers to buy recycled products. The County shall use recycled products or products containing recycled materials when possible.	**Consistent.** As discussed above, the proposed project would employ recycling and conservation programs similar to those that occur at the nearby Olancha Crystal Geyser spring water bottling plant. The recycling program would include the sale of recyclable plastics and cardboard materials to private recycling companies. In 2010, the nearby Olancha bottling plant recycled approximately 150 tons of recyclable plastics and 145 tons of recyclable cardboard material.
Goal PSU-8: To protect the residents of and visitors to Inyo County from injury and loss of life and to protect property from fires.	**Consistent.** As discussed in the project's Initial Study (**Appendix A** of his Draft EIR), the project would result in a less than significant impact with respect to fire. The project would be designed with a comprehensive fire suppression system that would include a stand-alone fire suppression building and internal building sprinklers. Further, the project would provide a 20-foot-wide access road encircling the bottling facility, with fire hydrants along its perimeter. The project would also be designed in accordance with applicable state and local regulations for sites within High Fire Hazard Severity Zone, including the maintenance of a defensible space around the structure and the removal of dead or dying woody materials from the perimeter of the building.
Policy PSU-8.1. Fire Protection for New Development: Prior to the approval of development projects, the County shall determine the need for fire protection services. New development in unincorporated areas of the County shall not be approved unless adequate fire protection facilities can be provided.	**Consistent.** As discussed above, the proposed project would include a comprehensive fire suppression including a stand-alone suppression building, sprinklers, a fire access road with hydrants, and a defensible space around the proposed structures. In addition, the proposed project would be reviewed and permitted by the County prior to construction.
Economic Development Element	
Goal ED-4: Actively encourage the expansion of existing industry of all types (including resource industries, manufacturing and service industries), and actively recruit new businesses that will bring new jobs to the County.	**Consistent.** The project proposes a water bottling facility, a light industrial use, in an area that already contains a nearby bottling facility. The proposed bottling facility would meet the future needs of the community by providing additional employment opportunities and revenue for Inyo County in an established industry type in the project vicinity while protecting the County's natural resources. By locating in an area with an existing bottling facility, the project would build on the skills of the existing employment base.
Policy ED-4.2. Manufacturing Growth: Encourage existing manufacturers to expand and create new job diversity. Manufacturers include value-added (bottled) water and other processed mineral export operations.	**Consistent.** As discussed above, the project proposes a water bottling facility, a light industrial value-added use, in an area that already contains a nearby bottling facility. Although the project would not diversify the employment types available, it would build on the existing employment base in the County.
Circulation Element	
Goal RH-1: A transportation system that is safe, efficient, and comfortable, which meets the needs of people and goods and enhances the lifestyle of the County's residents.	**Consistent.** As discussed in **Section 4.I, Transportation**, of this Draft EIR, and in the project's Traffic Impact Analysui (TIA) (**Appendix G** of this Draft EIR), the project would not cause any intersections or roadways within Inyo County to operate at unacceptable levels. The project would provide adequate acceleration/ deceleration and turning lanes to accommodate vehicles entering US 395 from the project site.

Table 4.F-1

Comparison of the Project to Applicable Policies of the Inyo County General Plan

Recommendation	Analysis of Proposed Project Consistency
	Additionally, adequate sight and cornering distance would be provided along US 395 at the proposed site access point.
Policy RH-1.3. Safer Truck Transportation: Facilitate safer truck transportation and ease the impact of truck traffic on residential areas.	**Consistent.** As discussed above, the proposed project would provide adequate acceleration/deceleration and turning lanes to accommodate vehicles entering US 395 from the project site. Adequate sight and cornering distance would be provided along US 395 at the proposed site access point. Moreover, it is anticipated that 99 percent of the project's truck traffic would travel to/from the south of the project site and would not pass through the unincorporated town of Cartago.
Policy RH-1.5. Proper Access: Provide proper access to residential, commercial, and industrial areas.	**Consistent.** The project proposes a new 24-foot-wide private access road to US 395. The project would also construct acceleration/deceleration lanes and turn lanes along US 395 at the location of the access roadway to adequately facilitate turning movements at the intersection.
Conservation/Open Space Element	
Goal WR-1: Provide an adequate and high quality water supply to all users within the County.	**Consistent.** The project site was largely chosen due to the high quality of groundwater and springs near the project site. As discussed in **Section 4.G, Hydrology**, of this Draft EIR, the three on-site production wells and one on-site domestic well would be adequate to serve the proposed project without significantly impacting the groundwater table, production potential, or water quality of the groundwater aquifer supporting the project site and surrounding vicinity.
Policy WR-1.1. Water Provisions: The County shall review development proposals to ensure adequate water is available to accommodate projected growth.	**Consistent.** As discussed above, the three on-site production wells and one on-site domestic well would be adequate to serve the proposed project without significantly impacting the groundwater table, production potential, or water quality of the groundwater aquifer supporting the project site and surrounding vicinity.
Policy WR-1.4. Regulatory Compliance: Continue the review of development proposals and existing uses pursuant to the requirements of the Clean Water Act, LRWQCB, and local ordinances to reduce polluted runoff from entering surface waters.	**Consistent.** The project's proposed leach mound system and stormwater retention basin would be designed in accordance to all applicable regulations. As discussed above, the County and LRWQCB would review and permit all components of the project that have potential to impact surface and groundwater quality, including the proposed leach mound system and stormwater retention basin.
Goal WR-3: Protect and restore environmental resources from the effects of export and withdrawal of water resources.	**Consistent.** Although the project proposes to withdrawal and export water from the underlying groundwater aquifer, as demonstrated throughout of a quantity that would result in significant environmental impacts. As discussed in **Section 4.G, Hydrology**, of this Draft EIR, the three on-site production wells and one on-site domestic well would not significantly impact the groundwater table, production potential, or water quality of the groundwater aquifer supporting the project site and surrounding vicinity. Further, as discussed in **Section 4.C, Biological Resources**, of this Draft EIR, the project would result in a less than significant impact with respect to biological resources on the project site and project vicinity.

Table 4.F-1

Comparison of the Project to Applicable Policies of the Inyo County General Plan

Recommendation	Analysis of Proposed Project Consistency
Policy WR-3.2. Sustainable Groundwater Withdrawal: The County shall manage the groundwater resources within the County through ordinances, project approvals and agreements, ensure an adequate, safe and economically viable groundwater supply for existing and future development within the County, protect existing groundwater users, maintain and enhance the natural environment, protect the overall economy of the County, and protect groundwater and surface water quality and quantity.	**Consistent.** As discussed above, the three on-site production wells and one on-site domestic well would be adequate to serve the proposed project without significantly impacting the groundwater table, production potential, or water quality of the groundwater aquifer supporting the project site and surrounding vicinity. The project would utilize this groundwater to meet the future needs of the community by providing additional employment opportunities and revenue for Inyo County through an industry type already established in the project vicinity.
Goal BIO-1: Maintain and enhance biological diversity and healthy ecosystems throughout the County.	**Partially Consistent**. The proposed project site would be located predominantly within and adjacent to a portion of the ranch that has already been disturbed by development of an unfinished subdivision in the 1980s, and is adjacent to disturbed and/or developed areas offsite to the north in the community of Cartago. The location and footprint of the area subject to disturbance as the result of project construction and operations were designed to minimize impacts on on-site wetland and non-wetland jurisdictional features (i.e., US Army Corps of Engineers/Regional Water Quality Control Board "waters of the US" and CDFG jurisdictional streambed and riparian habitat), sensitive plant communities (i.e., red willow thicket), as well as sensitive plant and wildlife species and nesting birds that may be present in the project vicinity. However, the project is still anticipated to result in potentially significant, although mitigable, impacts on these resources.
Policy BIO-1.2. Preservation of Riparian Habitat and Wetlands: Important riparian areas and wetlands, as identified by the County, shall be preserved and protected for biological resource value.	**Partially Consistent.** The location and footprint of proposed project site were designed to minimize direct impacts through removal of on-site wetland and non-wetland jurisdictional resources (i.e., US Army Corps of Engineers/Regional Water Quality Control Board "waters of the US" and CDFG jurisdictional streambed and riparian habitat). However, the project is still anticipated to result in potentially significant, although mitigable, impacts on these resources through permanent removal of approximately 0.04 acres of non-wetland ACOE/RWQCB "waters of the U.S.", and 0.16 acres of non-wetland CDFG jurisdictional resources. Project pumping of groundwater was also estimated to reduce spring flows along the Spring Line fault by 17 percent during the normal, long-term scenario and by 38 percent during the short-term, high-production summer period, and to result in seasonal lowering of the shallow aquifer zone groundwater level by between 0.54 feet and 1.21 feet, depending on well location, under the long-term pumping scenario.

Table 4.F-1

Comparison of the Project to Applicable Policies of the Inyo County General Plan

Recommendation	Analysis of Proposed Project Consistency
Goal CUL-1: Preserve and promote the historic and prehistoric cultural heritage of the County.	**Consistent.** Four existing archaeological resources were identified within the footprint of the proposed project site. It was determined that none qualify as "unique archaeological resources" pursuant to CEQA or are eligible for listing in the California or National Registers. In the event that undiscovered on-site resources are present on the project site, the required mitigation measures would ensure that a qualified archaeological monitor and Native American monitor would be present during grading and excavation, and any resources unexpectedly uncovered are evaluated and an appropriate treatment plan developed, which would reduce impacts to a less than significant level. The project would demolish one potentially significant historical resource, Residence 2, to prevent contamination of the shallow aquifer system by unused aboveground buildings and other development on the project site. Although Residence 2 appears to contain a wall remaining from its original construction in 1871, it was determined to lack integrity as an architectural resource. However, it retains the potential to yield important information about activities historically conducted on the ranch. Required mitigation would ensure the retention of a qualified architectural historian to conduct construction monitoring and retrieval and archiving of significant materials for future study, which would reduce impacts to a less than significant level.
Policy CUL-1.3. Protection of Cultural Resources: Preserve and protect key resources that have contributed to the social, political, and economic history and prehistory of the area, unless overriding circumstances are warranted.	**Consistent**. As noted above under Goal CUL-1, it was determined that no "unique archaeological resources" pursuant to CEQA are present on the project site. The required mitigation measures would ensure that a qualified archaeological monitor and Native American monitor would be present during grading and excavation to ensure that any resources unexpectedly uncovered during construction are evaluated and an appropriate treatment plan developed, which would reduce impacts to a less than significant level. Also as noted above under Goal CUL-1, the project would demolish one potentially significant historical resource, Residence 2. Although determined to lack integrity as an architectural resource, it retains the potential to yield important information about activities historically conducted on the ranch. Required mitigation would ensure impacts on this resources would be reduced to less than significant levels.
Policy CUL-1.5. Native American Consultation: The County and private organizations shall work with appropriate Native American groups when potential Native American resources could be affected by development proposals.	**Consistent.** As noted in **Section 4.D,** *Archaeological and Paleontological Resources*, of this Draft EIR, and in the Responses to the Notice of Preparation (NOP) (**Appendix A** of this Draft EIR) for this Draft EIR, coordination with the Native American Heritage Commission, Big Pine Paiute Tribe, and the Paiute-Shoshone Tribe has been undertaken prior to and during preparation of this Draft EIR. Additional coordination will take place during preparation of the Final EIR.
Goal VIS-1: Preserve and protect resources throughout the County that contribute to a unique visual experience for visitors and quality of life for County residents.	**Consistent.** As discussed in **Section 4.A,** *Aesthetics*, of this Draft EIR, the proposed project would not obstruct views across the project site and would result in a less than significant impact with respect to the visual character of the project site and surrounding area.

Table 4.F-1

Comparison of the Project to Applicable Policies of the Inyo County General Plan

Recommendation	Analysis of Proposed Project Consistency
Policy VIS-1.4. Equipment Screening: Within communities, building equipment shall be screened from public view.	**Consistent.** The majority of on-site activity (e.g., loading docks, parking lot, truck operations) would take place at the back (east) side of the bottling plant and would not be visible from US 395 or the town of Cartago. The exterior equipment located on the south side of the bottling facility would also be screened from view from US 395 by distance and existing vegetation.
Policy VIS-1.6. Control of Light and Glare: The County shall require that all outdoor light fixtures including street lighting, externally illuminated signs, advertising displays, and billboards use low-energy, shielded light fixtures which direct light downward (i.e., lighting shall not emit higher than a horizontal level) and which are fully shielded. Where public safety would not be compromised, the County shall encourage the use of low-pressure sodium lighting for all outdoor light fixtures.	**Consistent.** The proposed project does not include any street lighting, illuminated signage, advertising displays, or billboards. Exterior and security lighting would be provided in the loading dock area, at all building entrances, at the outside mechanical equipment pads, and in the parking lot. All exterior lighting would be fully shielded to direct lighting downward and to prevent spillover. On-site lighting would be designed to meet LEED requirements for the Light Pollution Reduction credit for industrial projects and in a manner to avoid impact to nearby residents, drivers on US 395, and the low ambient nighttime lighting conditions in the vicinity.
Public Safety Element	
Goal AQ-1: Provide good air quality for Inyo County to reduce impacts to human health and the economy.	**Consistent.** The project site is located in the 13,975-square-mile Great Basin Valley Air Basin (GBVAB), and specifically in the Owens Valley Planning Area. The Inyo County portion of the GBVAB has a non-attainment status for ozone (State standards only. All of the GBVAB has a non-attainment status for particulate matter under 10 microns in diameter (PM_{10}); the Owens Valley Planning Area is in "serious non-attainment" for PM_{10} under both State and Federal designations. Project construction would generate fugitive dust resulting in potentially significant PM_{10} impacts; however, with the required mitigation measures established by the Great Basin Unified Air Pollution District for the control of fugitive dust, impacts would be reduced to a less than significant level. Project operations would result in less than significant air quality impacts.
Policy AQ-1.3. Dust Suppression During Construction: Require dust-suppression measures for grading activities.	**Consistent.** As discussed above under Goal AQ-1, project construction would generate fugitive dust resulting in potentially significant PM_{10} impacts. With implementation of the required mitigation measures established by the Great Basin Unified Air Pollution District for the control of fugitive dust, impacts would be reduced to a less than significant level Project operations would result in less than significant air quality impacts..
Policy AQ-1.4. Energy Conservation: Encourage the use of energy-conservation devices in public and private buildings.	**Consistent.** As early as Phase II, the proposed project would seek LEED certification. The project would implement a comprehensive recycling program similar to the existing bottling plant in Olancha, provide an employee shuttle, provide preferential parking for low-emissions or fuel-efficient vehicles, and utilize light-colored roofing. The project would also be designed in accordance with the State Building Energy Efficiency Standards (Title 24 California Code of Regulations).
Goal WF-1: Prevent wildfires and provide	**Consistent.** As concluded in the project's Initial Study (provided in

Table 4.F-1

Comparison of the Project to Applicable Policies of the Inyo County General Plan

Recommendation	Analysis of Proposed Project Consistency
public safety from wildfire hazards.	**Appendix A** of this Draft EIR), the project site is located in a High Fire Hazard Severity Zone, as designated by Cal-Fire. Nonetheless, the project would be designed in accordance with applicable state and local regulation. In accordance with the regulations, the building would be constructed of approved materials and would maintain a defensible space around the structure, including a 20-foot-wide access road around the bottling plant. Additionally, as part of routine maintenance, dead or dying woody materials would be cleared from the perimeter of the building. Lastly, to reduce the potential for on-site fires, the project would also be designed with a comprehensive fire suppression system.
Policy WF-1.3. Fuel Modification: Require fuel modification for structures within fire hazard zones.	**Consistent.** As discussed above, the project would include a defensible space around the structure that would include a 20-foot-wide access road encircling the bottling facility. Further, as part of routine maintenance, dead or dying woody materials would be cleared from the perimeter of the building.
Goal GEO-1: Minimize exposure to hazards and structural damage from geologic and seismic conditions.	**Consistent.** As concluded in the project's Initial Study (provided in **Appendix A** of this Draft EIR), the eastern portion of an Alquist-Priolo Earthquake Fault Zone, positioned around the active Owens Valley Fault, crosses onto the western portion of the overall Cabin Bar Ranch property. The eastern boundary of this Alquist-Priolo Earthquake Fault Zone is located approximately 0.27 mile west and southwest of the project site. As such, the Owens Valley Fault does not cross the project site and no known surface expressions of the fault are known to be located on the project site. As such, impacts related to surface rupture of a known earthquake fault are not anticipated. As with any new development in the State of California, all structures built as part of the proposed project, would be constructed in conformance with California Building Code (CBC) standards. The 2010 CBC incorporates the latest seismic design standards for structural loads and materials to provide for the latest in earthquake safety. Additionally, construction of the proposed project would be required to adhere to applicable recommendations provided in the site-specific Geotechnical Report prepared for the proposed project, and referenced in the project Initial Study.
Policy GEO-1.4. Design Measures: Require that new development of habitable structures that are located within potential seismic hazard zones provide appropriate engineering design strategies to comply with appropriate building standards.	**Consistent.** As discussed above, although the project site is within a fault zone, the proposed project would be designed in accordance with applicable CBC standards, as well as in accordance with project's site-specific Geotechnical Report, referenced in the project Initial Study.
Goal NOI-1: Prevent incompatible land uses, by reason of excessive noise levels, from occurring in the future. This includes protecting sensitive land uses from exposure to excessive noise and to protect the economic base of County by preventing the encroachment of incompatible land uses within areas affected by existing or planned noise-producing uses.	**Consistent.** As discussed above, all exterior noise-generating features would be located away from nearby residents. The site's access road would be relocated approximately 2,500 feet south of the existing Cabin Bar Ranch Road; all loading activity would take place to the rear (east side) of the facility; and the limited exterior equipment required for the plant's operation would be located along the south wall of the bottling facility. As concluded in **Section 4.H,** *Noise*, of this Draft EIR, the project's construction and operation would result in a less than significant impact on nearby noise-sensitive land uses.

Table 4.F-1

Comparison of the Project to Applicable Policies of the Inyo County General Plan

Recommendation	Analysis of Proposed Project Consistency
Policy NOI-1.1. Acceptable Noise Limits: The County shall utilize the noise levels shown in Table 9-9 [of the Inyo County General Plan] for evaluating project compatibility related to noise.	**Consistent.** As concluded in **Section 4.H,** *Noise*, of this Draft EIR, the project's construction noise levels would exceed the levels established in Table 9-9 of the Inyo County General Plan, at the nearest off-site residential uses. With the implementation of the required mitigation measures, impacts would be reduced to less than significant. Operational noise impacts would be less than significant.
Policy NOI-1.3. Limit Increases in Noise Levels from Stationary Sources: Require that new development not increase the ambient exterior noise level (measured at the property line) above established County noise standards (as shown in Table 9-9 of the Inyo County General Plan), unless mitigation measures are included to reduce impacts to below County noise standards.	**Consistent.** As concluded in **Section 4.H,** *Noise*, of this Draft EIR, the project's construction noise levels would exceed the levels established in Table 9-9 of the Inyo County General Plan, at the nearest off-site residential uses. With the implementation of the required mitigation measures, impacts would be reduced to less than significant. Operational noise impacts would be less than significant.
Policy NOI-1.5. Implementation of Mitigation Measure: Require that proponents of new projects provide or fund the implementation of noise-reducing mitigation measures to reduce noise to required levels.	**Consistent.** As concluded in **Section 4.H,** *Noise*, of this Draft EIR, the project's construction noise levels would exceed the levels established in Table 9-9 of the Inyo County General Plan, at the nearest off-site residential uses. With the implementation of the required mitigation measures, impacts would be reduced to less than significant. Operational noise impacts would be less than significant.
Policy NOI-1.7. Noise Controls During Construction: Contractors will be required to implement noise-reducing mitigation measures during construction when residential uses or other sensitive receptors are located within 500 feet.	**Consistent.** Construction activity would occur within 500 feet of the nearest residences north of the project site, in Cartago. The nearest residence is located approximately 300 feet from the proposed construction activities. As concluded in **Section 4.H,** *Noise*, of this Draft EIR, the project's construction noise levels would exceed the levels established in Table 9-9 of the Inyo County General Plan, at the nearest off-site residential uses. With the implementation of the required mitigation measures, impacts would be reduced to less than significant.

[a] *Inyo County General Plan*

Source: PCR Services Corporation, 2012.

Bottling facilities are not permitted in either the RP or RRH land use designations; therefore, a General Plan amendment is sought to accommodate the proposed project. Specifically, the General Plan amendment would apply the Light Industrial (LI) land use designation to approximately 23.46 acres of the project site. The LI land use designation provides for industrial parks, warehousing, light manufacturing, public and quasi-public uses, and similar and compatible uses where there are no significant air, odor, water, visual or hazard issues. The standard FAR for this designation is 0.50, but may be increased under certain circumstances with a CUP up to 1.20.

The project proposes a water bottling facility, which is inherently a light, non-polluting industry type consistent with the LI land use designation. Thus, with approval of the requested General Plan amendment, the project would introduce a use (i.e., a water bottling facility) permitted under the LI land use designation,

and would therefore be consistent with the General Plan's land use designation. Since Cabin Bar Ranch is approximately 420 acres in size, the proposed project would be well within the 0.50 FAR allowed under the LI land use designation. Moreover, as discussed throughout this Draft EIR, the proposed project would not result in significant impacts with respect to air or odors (refer to **Section 4.B-1,** *Air Quality*), water (refer to **Section 4.G,** *Hydrology*), visual (refer to **Section 4.A,** *Aesthetics*), or hazards (refer to the Initial Study provided in **Appendix A**) issues. No development would occur on the portions of Cabin Bar Ranch outside of the proposed project site, and therefore the remainder of Cabin Bar Ranch would be consistent with the existing land use designations. Since the project proposes development permitted within the LI land use designation and would not result in significant air, odor, water, visual, or hazard impacts, the project would substantially comply with the General Plan Land Use designation and the pertinent goals and policies contained in the General Plan Elements, and impacts would be less than significant.

(2) Inyo County Code

As mentioned above, the portion of Cabin Bar Ranch on which the project would be located (i.e., the project site) is zoned RR-1.0 (Rural Residential, one-acre minimum) and OS-40 (Open Space, 40-acre minimum). Water bottling facilities are not a permitted use within these zoning designations. As a result, the project is requesting a zone reclassification to accommodate the project site. Specifically, the proposed project would rezone a 12.29-acre portion of Cabin Bar Ranch currently zoned OS-40 and an 11.17-acre portion of Cabin Bar Ranch currently zoned RR-1.0 to the M-2 (Light Industrial) zoning designation, for a total of 23.46 acres of Cabin Bar Ranch that would be rezoned to the M-2 zoning designation. The M-2 zone allows a bottling plant as a conditional use. As such, a CUP is being requested as part of the proposed project.

As mentioned above, the M-2 zoning designation is intended to designate suitable and appropriate areas for light, less intense, and small-scale manufacturing activities that normally take place within enclosed structures. The project proposes a water bottling plant, which is inherently a light, non-polluting industry type. Although the M-2 zoning designation does not permit bottling plants as a primary or accessory use, Chapter 18.56.040 (Conditional Uses) of the Inyo County Code includes as a conditional use "Bottling plant[s] including retail and wholesale establishments for the distribution of bottled products manufactured or produced by the industry on the same site". The lots that make up the subdivided portion of Cabin Bar Ranch would be merged or extinguished as part of the proposed project, likely through a Reversion to Acreage Process or a parcel merger and road abandonment. The project would leave most of Cabin Bar Ranch in an undeveloped state, since the majority of the project site is proposed for an area of the ranch already disturbed as the result of a partially developed residential subdivision. With approval of the requested Zone Change and CUP, the project would comply with all applicable provisions of the Inyo County Code and impacts would be less than significant.

3. MITIGATION MEASURES

The design of the proposed project would result in less than significant impacts with respect to land use regulations guiding development on the project site and compatibility with existing land uses. Since the project would have less than significant land use impacts, no mitigation measures are necessary.

4. CUMULATIVE IMPACTS

Eight related projects have been identified in the project area, including Caltrans's proposed widening and realignment of US 395, Rio Tinto trona mining within Owens Lake, the expansion of the Duck Club north of Cartago, three LADWP programs concerning Owens Lake habitat restoration and dust mitigation, and multiple uses, one LADWP project that proposes a solar array, and the Desert Renewable Energy Conservation Plan. Under the Caltrans project, the existing US 395 alignment adjacent to Cabin Bar Ranch would become a frontage road to the new US 395 alignment. However, construction of the Caltrans project is not anticipated to begin until 2016, by which time the proposed project anticipates buildout. At that time, reconstruction of the project site access road intersection with the frontage road and US 395 would conform to applicable Caltrans requirements. The remaining projects are relatively distant from the project site and would not affect nearby land uses, or are of a programmatic nature that would not contribute to cumulatively significant land use impacts. The project, considered together with the related projects, would not result in a cumulatively considerable contribution to cumulatively significant land use impacts.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

As mentioned above, the proposed project would result in a less than significant impact with respect to land use and no mitigation measures are required.

4.0 ENVIRONMENTAL IMPACT ANALYSIS
G. HYDROGEOLOGY & SURFACE HYDROLOGY

INTRODUCTION

This section provides an analysis of the potential impacts of the proposed project with respect to groundwater geology and surface hydrology conditions. The section includes an overview of regulations pertinent to groundwater resources; a description of existing regional and local hydrologic conditions; and an evaluation of potential impacts to groundwater supplies, groundwater flow direction or recharge, and, groundwater quality during construction and operation of the proposed project. This analysis is based primarily on the *Hydrogeologic Evaluation for Crystal Geyser Roxane, Cabin Bar Ranch Water Bottling Facility Project, Inyo County, California*, prepared by Richard C. Slade & Associates, Consulting Groundwater Geologists (June 2012). This report is included as **Appendix F** of this Draft EIR.

1. ENVIRONMENTAL SETTING

a. Regulatory Framework

(1) Federal

Clean Water Act

Regulatory and permitting processes have been established to control the quality of surface water runoff during construction and operation of development projects. In 1972, the Federal Water Pollution Control Act, also referred to as the Clean Water Act (CWA), was amended to provide that the discharge of pollutants into waters of the U.S. from any point source is unlawful, unless a National Pollutant Discharge Elimination System (NPDES) permit authorizes the discharge. The CWA was amended in 1987 requiring the U.S. Environmental Protection Agency (USEPA) to create specific requirements for discharges. In response to the 1987 amendments to the CWA, Phase I of the USEPA NPDES Program required NPDES permits for: (1) municipal separate storm sewer systems generally serving, or located in, incorporated cities with 100,000 or more residents (referred to as municipal permits); (2) eleven specific categories of industrial activity; and (3) construction activity that disturbs five acres or more of land. As of March 2003, Phase II of the NPDES Program extended the requirements for NPDES permits to small municipal separate storm sewer systems, construction sites of one to five acres, and industrial facilities owned or operated by small municipal separate storm sewer systems, which were previously exempted from permitting. With respect to groundwater quality in general, Title 40 Code of Federal Regulations (CFR), Part 141 establishes threshold concentrations for specific minerals and chemicals in groundwater and drinking water to protect human health.

Total Maximum Daily Load Plan

The CWA requires states to adopt water quality standards for receiving water bodies and to have those standards approved by the USEPA. Water quality standards consist of designated beneficial uses for a particular receiving water body (e.g., wildlife habitat, agricultural supply, fishing, etc.), along with water quality criteria necessary to support those uses. Water quality criteria are either prescribed concentrations or levels of constituents such as lead, suspended sediment, and fecal coliform bacteria, or narrative statements which represent the quality of water that supports a particular use.

When designated beneficial uses of a particular receiving water body are being compromised by water quality, Section 303(d) of the CWA requires identifying and listing that water body as "impaired." Once a water body has been deemed impaired, a Total Maximum Daily Load (TMDL) plan must be developed for the impairing pollutant(s). A TMDL plan is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards (with a "factor of safety" included). Once established, the TMDL plan allocates the loads among current and future pollutant sources to the water body.

The CWA requires states to publish, every two years, an updated list of streams and lakes that are not meeting their designated uses because of excess pollutants (i.e., impaired water bodies). The list, known as the "303(d) list", is based on violations of water quality standards. Once a TMDL is developed and adopted, the water quality limited section is removed from the 303(d) list.[1]

(2) State

Porter-Cologne Water Quality Control Act

The CWA places the primary responsibility for the control of surface water pollution and for planning the development and use of water resources with the states, establishing certain guidelines for the states to follow in developing these programs. It also allows the USEPA to withdraw control from the states if their implementation mechanisms are found to be inadequate. In California, the NPDES program is administered by the State Water Resources Control Board (SWRCB) through nine Regional Water Quality Control Boards (RWQCBs). The SWRCB and the RWQCBs were established in 1969 by the Porter-Cologne Water Quality Control Act, which is embodied in the California Water Code and is the principal law governing water quality regulation in California. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum products. Each RWQCB must formulate and adopt a Water Quality Control Plan (Basin Plan) for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and by the SWRCB in its state water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste. The proposed project site is located in Region 6, also known as the Lahontan Region, and is governed by the Lahontan Regional Water Quality Control Board (LRWQCB).

Water Quality Control Plan for the Lahontan Region (Basin Plan)

The Lahontan Region is the second largest of the nine jurisdictional regions in California, encompassing more than 33,000 square miles and extending from the Oregon border to the northern Mojave Desert, including all of California east of the Sierra Nevada crest. It is nearly 600 miles long and includes both the highest and lowest points in the contiguous United States: Mt. Whitney and Death Valley. The Lahontan Region is divided into the North and South Basins at the boundary between the Mono Lake and East Walker River watersheds. The South Basin, within which the project site is located, encompasses three major surface water systems (the Mono Lake, Owens River, and Mojave River watersheds) and several separate

[1] *Lahontan Region Total Maximum Daily Load Program, 2012 Section 303(d) List; http://www.waterboards.ca.gov/rwqcb6/water_issues/programs/tmdl/index.shtml; accessed May 2012.*

closed groundwater basins.[2] The project site is located within the Owens Valley Hydrologic Basin, which encompasses 1,031 square miles and includes Benton, Hammil, and Chalfant Valleys in Mono County and Round and Owens Valleys in Inyo County, all of which flow south into the closed Owens Lake drainage depression in the southern Owens Valley. [3]

The Water Quality Control Plan for the Lahontan Region (Basin Plan) for the Lahontan Region is the basis for the Regional Board's regulatory program. It sets forth water quality standards for the surface and ground waters of the Lahontan Region, which include both designated beneficial uses of water and the water quality objectives which must be maintained to protect those uses. It defines types of water quality problems, which can threaten beneficial uses in the Lahontan Region, and identifies required or recommended control measures for these problems.[4] The identified beneficial uses and water quality criteria are the Lahontan Region's water quality standards for purposes of the CWA.

Some of the designated beneficial uses in the Lower Owens Hydrologic Basin, particularly in the area of Cartago Creek, include agricultural supply, municipal and domestic supply, groundwater recharge, noncontact and water contact recreation, commercial and sport fishing, cold freshwater habitat, wildlife habitat, and spawning, reproduction and early development of fish and wildlife.[5] Water quality objectives of the Basin Plan include the non-degradation objective, surface water quality objectives, and groundwater quality objectives.[6]

NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities

The California General Construction Activity Permit, adopted by the SWRCB regulates construction activity that includes clearing, grading, and excavation resulting in soil disturbance of at least one acre of total land area.[7] This general permit authorizes the discharge of stormwater to surface waters from construction activities. It prohibits the discharge of materials other than stormwater and authorized non-stormwater discharges and all discharges that contain a hazardous substance in excess of reportable quantities established in 40 CFR 117.3 and 40 CFR 302.4 unless a separate NPDES permit has been issued to regulate those discharges. The NPDES General Construction Activity Permit requires that all developers of land where construction activities will occur over more than one acre do the following:

- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation;

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2 *Lahontan Regional Water Quality Control Board, Factsheet; http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/factsheets/rb6_cw101.pdf; accessed May 2012.*

3 *State of California Department of Water Resources, Bulletin #118, 2003.*

4 *State of California Regional Water Quality Control Board – Lahontan Region, Water Quality Control Plan for the Lahontan Region (Basin Plan). Plan effective March 31, 1995, with amendments effective August 1995 to December 2005; http://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/references.shtml; accessed May 2012.*

5 *Basin Plan, Chapter 2, Present and Potential Beneficial Uses; http://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/docs/ch2_beneficialuses.pdf; accessed May 2012.*

6 *Basin Plan, Chapter 3, Water Quality Objectives; http://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/docs/ch3_wqobjectives.pdf; accessed May 2012.*

7 *State Water Resources Control Board, NPDES General Permit for Discharges Associated with Construction Activity (Water Quality Order No. 99-08-DWQ); http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wqo2009_0009_dwq.pdf; accessed May 2012.*

- Develop and implement a Stormwater Pollution Prevention Plan (SWPPP), which specifies Best Management Practices (BMPs) that will reduce pollution in stormwater discharges to the Best Available Technology Economically Achievable/Best Conventional Pollutant Control Technology standards; and
    - Perform inspections and maintenance of all BMPs.

In order to obtain coverage under the NPDES General Construction Activity Permit, a project applicant must submit a Notice of Intent (NOI) to the RWQCB and prepare a SWPPP. BMPs within the SWPPP typically address minimization of erosion during construction, stabilization of construction areas, sediment control, control of pollutants from construction materials, and post-construction management (e.g., the minimization of impermeable surfaces, treatment of runoff, etc.). The SWPPP must also include a discussion of the program to inspect and maintain all BMPs.

NPDES Permit for Limited Threat Discharges to Surface Waters

40 CFR Section 122.28 provides for the issuance of General Permits to regulate discharges of wastes generated from similar sources. On September 22, 1989, the USEPA and SWRCB entered into a memorandum of agreement which authorized and established procedures for the SWRCB and the RWQCBs to issue general NPDES permits in accordance with 40 CFR 122.28. Within the Lahontan Region, it is recognized that there are discharges to surface waters from sources that typically do not contain significant quantities of pollutants, and such discharges are appropriately regulated under a General, rather than Individual, permit. Accordingly, the LRWQCB has issued a General Permit for Limited Threat Discharges to Surface Waters to provide adequate control, monitoring and ensure proper reporting.[8]

To be authorized by this General Permit, discharges must meet the following criteria:

- Pollutant concentrations in the discharge do not (1) cause, (2) have a reasonable potential to cause, or (3) contribute to an excursion above any applicable federal water quality criterion promulgated by the USEPA pursuant to CWA Section 303, or water quality objective adopted by the LRWQCB or the SWRCB, including discharge prohibitions for the receiving waters in the Lahontan Region.
- Pollutant concentrations in the discharge will not cause or contribute to degradation of water quality or impair beneficial uses of receiving waters.
- The discharge does not cause acute or chronic toxicity in the receiving waters.
    - Discharge to land is not a practical alternative based on information provided by the discharger.

To obtain authorization for discharges under this General Permit, the owner or developer responsible for the project must submit a NOI and a BMP Plan to control discharges. BMPs are required to include disposal practices to ensure compliance with the General Permit. The discharger is required to conduct monitoring and reporting and submit any available data relevant to the discharge and the receiving water with the NOI. The owner or developer is authorized to discharge under the terms and conditions of this General Permit

[8] *California Regional Water Quality Control Board, Lahontan Region, NPDES Permit for Limited Threat Discharges to Surface Waters (Board Order No. R6T-2008-0023); http://www.waterboards.ca.gov/lahontan/board_decisions/adopted_orders/2008/docs/r6t_2008_0023_wdr_npdes.pdf; accessed May 2012.*

only after receiving a written Notice of Applicability (NOA) from the Water Board Executive Officer (or designee).

California Department of Public Health, Food and Drug Branch, Private Water Source Operator License Program and Bottled Water Plant License

The California Health and Safety Code, Section 11120, requires operators of private water sources operating within the State to obtain a Private Water Source Operator License from the Department of Public Health's Food and Drug Branch (FDB).[9] The operator must provide the following information from a licensed or certified hydrogeologist, geologist, engineering geologist, or hydrogeological engineer:

- Description of water source location, including natural springs, wells, and bore holes (if applicable), buildings, storage tanks, and piping;
- A review of the area hydrogeology, including the vertical and horizontal extents of the aquifer;
- Identification of the recharge area or zone of influence of the source, and documentation of actual and potential contamination;
- A description of the method of construction, collection, or catchment of the water source, storage facilities, conveyance systems, underground piping, and treatment and loading systems to be used, and documentation that all equipment is certified for potable water or food uses;
- If the water source is groundwater, evidence that the source is not under the direct influence of surface water as defined in 40 CFR 141.2;
- Substantiation that the water source designation, such as a spring or artesian well, meets the definition for these terms as described in the California Health and Safety Code 111175 and 21 CFR 165.110(a).
- If the source is a spring and a bore hole is used, documentation must be provided that explains why and provides data proving a hydraulic connection between the bore hole and underground stratum supplying the natural spring, and proving that water from the bore hole, before treatment, shares the physical properties of the spring water that flows naturally to the ground surface.

The FDB also requires information from the local health agency or other approval authority that contains the well/bore hole driller's report and logs; sealing diagrams, certificate of satisfactory construction; a sanitary appraisal report; and evidence of compliance with the California Environmental Quality Act (CEQA). Finally, the FDB requires the results of analytical tests of water quality (i.e., general chemical, physical, radiological, and bacteriological properties) following completion of construction of the entire system, including well drilling, piping, installation of storage tanks, and loading systems. California has adopted all federal water quality requirements for bottled water except the standard for trihalomethanes (THMs), for which it has adopted a more stringent (lower) threshold. Any subsequent changes in bottled water manufacturing system design or construction must be reported to the FDB.

[9] *California Department of Public Health, Food and Drug Branch, Procudire for Obtaining a Private Water Source Operation License, http://www.cdph.ca.gov/pubsforms/Documents/fdbBVWgde03.pdf.; accessed July 2012.*

The FDB also regulates the storage and distribution (21 CFR Part 110.93), record-keeping, labeling (21 CFR Part 101 and Part 102.33), and advertising of bottled water sold in the State.[10] Manufacturers of bottled water are required to obtain a Bottled Water Plant License (distinct from the Private Water Source Operator license) from the FDB.

(3) Regional

Inyo County General Plan

The Inyo County (County) General Plan Land Use Element contains the provisions related to both land use and public services and utilities. This Element identifies goals, policies and implementation measures designed to encourage and allow appropriate development with the adequate provision of public services and utilities. The public services and utilities goals and policies related to water, wastewater, and stormwater drainage are as follows:[11]

Water Goal PSU-3: To ensure that there will be a safe and reliable water supply sufficient to meet the future needs of the County.

- Policy PSU-3.1: Efficient Water Use – The County shall promote efficient water use and reduced water demand by:
  - Requiring water-conserving design and equipment in new construction;
  - Encouraging water-conserving landscaping and other conservation measures;
  - Encouraging the retrofitting of existing development with water-conserving devices;
  - Providing public education programs;
  - Distributing outdoor lawn watering guidelines;
  - Promoting water audit and leak detection programs; and
  - Enforcing water conservation programs.
- Policy PSU-3.2: Community Water Systems – The County shall encourage the viability of community water systems rather than the reliance upon individual water wells.

Wastewater Goal PSU-4: To ensure adequate wastewater collection, treatment, and disposal.

- Policy PSU-4.1: Community Wastewater Treatment Facilities – The County shall limit the expansion of unincorporated, urban density communities to areas where community wastewater treatment facilities can be provided.
- Policy PSU-4.2: Community Systems – The County shall require that any new community wastewater treatment facilities serving residential subdivisions be owned and maintained by a County Service Area or other public entity approved by the County.

[10] *California Department of Public Health, Bottled and Vended Water, http://www.cdph.ca.gov/programs/Pages/fdbBVW.aspx; accessed July 2012.*

[11] *Inyo County Planning Department, Inyo County General Plan – Land Use Element, Chapter 4, December 2001; http://www.inyoplanning.org/general_plan/goals/ch4.pdf; accessed May 2012.*

- Policy PSU-4.3: Sewage Disposal Service Districts – The County shall encourage, as an alternative to a sewer system, the creation of Community Service Districts with powers to manage the rehabilitation, replacement, maintenance and monitoring of all on-site septic/leach systems for communities not served by conventional sewer systems.

- Policy PSU-4.4: Permitting Individual On-Site Systems – The County shall permit individual on-site sewage disposal systems on parcels that have the area, soils, and other characteristics that permit installation of such disposal facilities without threatening surface or groundwater quality or posing any other health hazards and where community sewer service is not available and cannot be easily provided.

Stormwater Drainage Goal PSU-5: To collect and dispose of stormwater in a matter that minimizes inconvenience to the public, minimizes potential water-related damage, and enhances the environment.

- Policy PSU-5.1: Project Design – The County shall encourage project designs that minimize drainage concentrations and coverage by impermeable surfaces.

- Policy PSU-5.2: Maintenance – The County shall require the maintenance of all drainage facilities, including detention basins and both natural and manmade channels, to ensure that their full carrying capacity is not impaired.

- Policy PSU-5.3: Natural Systems – The County shall encourage the use of natural stormwater drainage systems in a manner that preserves and enhances natural features.

- Policy PSU-5.4: Runoff Quality – The County shall improve the quality of runoff from urban and suburban development through the use of appropriate and feasible mitigation measures including, but not limited to, artificial wetlands, grassy swales, infiltration/sedimentation basins, riparian setbacks, oil/grit separators, and other best management practices.

- Policy PSU-5.5: Drainage Disposal – New development shall have surface drainage disposal accommodated in one of the following ways:

  - Positive Drainage – positive drainage to a County-approved storm drain or detention facility.
  - On-site drainage – drainage retained on-site within the development.
  - Drainage directly to a natural system (i.e., stream, creek) is discouraged and is subject to the LRWQCB and California Department of Fish and Game provisions.

- Policy PSU-5.6: Drainage System Requirements – Future drainage systems shall comply with applicable state and federal non-point source pollutant discharge requirements.

Inyo County Ordinance No. 1004

The purpose and intent of County Ordinance No. 1004 is to establish a policy to protect the economy and environment in the County as it relates to transfer or transport of groundwater in the County for use outside the groundwater Basin, particularly prohibiting the acquisition of groundwater by the City of Los Angeles.

However, the proposed project is exempt from the groundwater transfer ordinance under Section 18.77.010.B.3, Exemptions, which exempts "a transfer or transport of water in the form of manufactured or processed goods or products, agricultural products, or in bottles or any other portable containers including tanker trucks, provided the total transfer or transport via tanker truck or trucks does not exceed one acre foot during a one-year period."[12]

Green Book for the Long-Term Groundwater Management Plan for the Owens Valley and Inyo County

The Green Book for the Long-Term Groundwater Management Plan for the Owens Valley and Inyo County (Green Book) is based on an agreement between the Los Angeles Department of Water and Power (LADWP) and Inyo County, which provides for ongoing management and monitoring for five primary subjects of concern, including (1) vegetation management, (2) vegetation inventory and development of vegetation management maps, (3) vegetation monitoring, (4) hydrologic management, and (5) further studies.[13] While the Green Book is technically a management tool for groundwater affected by LADWP pumping activities, it can be used as a guidance document with useful planning information for other development projects in the area.

Additional studies by the Inyo County Water Department (ICWD) and LADWP are conducted on an annual basis, focusing primarily on the five Green Book subjects of concern. These are then reported in the Owens Valley Monitor, which is ICWD's annual report on monitoring and other work performed by the ICWD and LADWP. The latest version is the 2010-2011 Owens Valley Monitor, which reports on runoff year 2010 (April 2010 to March 2011). In accordance with agreements between Inyo County and the City of Los Angeles, ICWD and LADWP monitor water activities in the Owens Valley and their effects on groundwater levels and vegetation. The two agencies also conduct scientific research on methods of improving water management.[14]

Owens Lake Habitat Management Plan

The Owens Lake Habitat Management Plan (OLHMP) was developed as a requirement from a mitigation measure under the terms of the 2008 State Implementation Plan Final Subsequent Environmental Impact Report for the Owens Lake Dust Mitigation Project (Mitigation Measure Biology – 14), as cumulative impacts to native wildlife may result from the dust control measures implemented on Owens Lake.[15] The overall goal of the OLHMP is to avoid direct and cumulative impacts to native wildlife communities that may result from implementation of dust control measures on lands owned by LADWP or the California State Lands Commission (CSLC). The OLHMP guides the construction, maintenance and operational needs of dust control implementation while considering the needs of the resident and migratory wildlife resources utilizing the Owens Lake Dust Control Area (DCA).

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[12] *Ordinance No. 1004, an ordinance of the Inyo County Board of Supervisors amending Chapter 18.77 of the Inyo County Code to regulate the transfer or transport of water from groundwater basins located wholly or partially within Inyo County, amending the Planning Department fee schedule and repealing Inyo County Ordinance No. 1003. http://www.inyowater.org/water_resources/Inyo_County_Ordinance_1004.pdf; accessed May 2012.*

[13] *Inyo County Water Department; Green Book for the Long-Term Groundwater Management Plan for the Owens Valley and Inyo County, June 1990; http://www.inyowater.org/Water_Resources/Green percent20Book percent202000.PDF; accessed May 2012.*

[14] *Inyo County Water Department; Owens Valley Monitor 2010-2011; http://www.inyowater.org/Annual_Reports/2010_2011/default.htm; accessed May 2012.*

[15] *Owens Lake Habitat Management Plan, March 2010; prepared by the Los Angeles Department of Water and Power.*

Prior to implementation of dust control measures, Owens Lake consisted of a large expanse of barren playa, a remnant hypersaline brine pool, and scattered springs and seeps along its shoreline. Water-based dust control measures, such as shallow flooding, inadvertently created habitat opportunities for wildlife where none existed before; however, in most of the DCA, this change was incidental, as the design and purpose of the dust control measures was for their dust control function. Implementation of the dust control measures resulted in increased use of Owens Lake by many wildlife species, as water and vegetation resources became more abundant throughout the former barren playa. Changes in dust control measures, in favor of other more water efficient methods, may be implemented in the future. The OLHMP seeks to sustain the ecological values in the DCA, since wildlife may be adversely impacted if dust control methods are changed from those that are more attractive to wildlife (i.e., shallow flooding and managed vegetation) to other approved alternatives (e.g., gravel).

In order to protect some of the newly-created habitats in the DCA and the wildlife species now using these areas, additional mitigation measures were required, including the management of 1,000 acres in perpetuity for shorebirds and snowy plovers, the creation of 145 acres of shallowly flooded habitat suitable for shorebird foraging, development of an appropriate deep water habitat plan in perpetuity to support migratory birds, ensuring that 17.5 acres of dust control measures within the California Department of Fish and Game (CDFG) Cartago Springs Wildlife Area are compatible with the designated land use, and other measures.[16]

Owens Valley Land Management Plan

The Owens Valley Land Management Plan (OVLMP) provides management direction for resources on all City of Los Angeles-owned lands in Inyo County, excluding the Lower Owens River Project (LORP) area. The OVLMP is a broad resource management plan that is intended to complement LORP plans for monitoring resources including water supply, habitat, recreation and land use, from Pleasant Valley Reservoir to Owens Lake. The OVLMP goals, objectives and management strategies have been shaped by the geographic and geopolitical characteristics of the Owens Valley. The OVLMP provides a framework for implementing management prescriptions through time, monitoring the resources, and adaptively managing changed land and water conditions, while focusing on the most important management tools for the ecosystem – stream flow and land use.[17]

The resource management priorities are derived from the 1997 Memorandum of Understanding (MOU) between LADWP, Inyo County, CDFG, CSLC, the Sierra Club, and the Owens Valley Committee. The MOU provides for the resolution of conflicts over the LORP and other LADWP projects, concerning groundwater pumping operations and related activities in the Owens Valley. The MOU directs that resource management plans, collectively referred to as the OVLMP, be prepared for City of Los Angeles-owned non-urban lands in the Owens River watershed in Inyo County that are not in the LORP planning area, as they are intended to complement the LORP Ecosystem Management Plan.

[16] *California Department of Fish and Game has determined that shallow-flooding or habitat restoration would be compatible with the Cartago Springs Wildlife Area's designated use.*

[17] *Final Owens Valley Land Management Plan, April 28, 2010; prepared by the Los Angeles Department of Water and Power and Ecosystem Sciences.*

The goals and objectives for the OVLMP are based on the premise that sustainable land and water use management will protect existing resources and lead to more desirable ecological conditions for both upland and riverine-riparian systems on City of Los Angeles-owned lands in Inyo County.

Water and land use management exert the greatest influence on the Owens River's biotic and abiotic components and, ultimately, the degree of functional state attained by the total ecosystem, as stream flow management and land use are the most important tools for management of the Owens River ecosystem. However, the requirement to meet the water needs of the City of Los Angeles limits LADWP's ability to manipulate flows in the Middle Owens River for riverine-riparian management. Any net increases in wetland/riparian habitat will be a consequence of land management actions that encourage recruitment of new vegetation and plant community diversity.

The following objectives were developed in order to achieve the OVLMP goals as described above and meet MOU expectations:

1. Maintain existing average in-channel flows.
2. Allow for annual out-of-channel or pulse flows to maintain existing riparian/wetland habitats.
3. Initiate ramping rates to minimize rapid water level changes.
4. Implement grazing strategies within riparian and upland pastures.
5. Establish a fire response plan.
6. Modify the location and intensity of recreational activities.
7. Establish guidelines to protect cultural resources.
8. Establish commercial use protocols.
9. Initiate habitat conservation strategies to enhance and protect T&E species habitat.
10. Monitor and use adaptive management through time.

b. Existing Conditions

(1) Geographic Location

The project site is located near the southern end of Owens Lake, approximately 20 miles south-southeast of Lone Pine, the nearest large town in Owens Valley, Inyo County, California. Specifically, the project site lies within Section 1 of Township 19 South, Range 36 East of the Mt. Diablo Baseline and Meridian (MDB&M). The approximate GPS coordinates of the proposed 43.24-acre project facility CGR on the 600-acre Cabin Bar Ranch property are Latitude 33.318ON, Longitude 118.021OW.[18]

[18] *Hydrogeologic Evaluation for Crystal Geyser Roxane, Cabin Bar Ranch Water Bottling Facility Project, Inyo County, California, prepared by Richard C. Slade & Associates, LLC, Consulting Groundwater Geologists, June 2012.*

The area lies within the southwestern portion of the Owens Valley Groundwater Basin of the South Lahontan Hydrologic Region, as defined by the California Department of Water Resources. The overall geologic conditions of the area have been reported by numerous researchers in the past, and the hydrologic evaluation prepared by Richard C. Slade (RCS) presents a summary of those earlier findings, together with specific information about the hydrogeologic conditions of the project site.

The southern Sierra Nevada Mountains are approximately three miles west of the project site and rise from the valley floor, which lies at approximately 3,600 feet above mean sea level (msl) near Highway 395, to an elevation of approximately 10,500 feet above msl at the crest of the range (five miles west of Cabin Bar Ranch). This crest serves as the local watershed divide and roughly coincides with the boundary between Inyo and Tulare counties. The total relief between the Cabin Bar Ranch property and the watershed divide is 6,900 ft. Olancha Peak, approximately 12,130 feet above msl and located approximately 6.5 miles southwest of the project site, is in the southern portion of this watershed divide, and provides total relief of 8,530 feet above the valley floor. The climate of the area is generally arid in the vicinity of Owens Lake, with rainfall generally low along the valley floor. However, at the higher mountainous elevations and along the watershed divide, rainfall and snowfall occur in much greater amounts.

Rainfall in the project area has averaged approximately 6.2 inches annually. Between 1923 and 2011, regional rainfall trends have been characterized by a drought between 1923 and 1960, with a short, hydrologically "wet" period between 1942 and 1946, and a long, hydrologically "wet" period through 2011. Between 1960 and 1984, there were more years of above-average rainfall than between 1984 through 2011, with relatively steeply increasing rainfall amounts until 1984, followed by slowly increasing rainfall amounts.[19]

(2) Geologic and Groundwater Conditions in the Project Area

Basement Rock Complex

Two distinct rock units, or basement complex rocks, are exposed at the ground surface or underlie the surficial soil deposits in the project area. West of the project site, the topography of the Sierra Nevada range represents the surface expression of these rock units, which primarily consist of Whitney Granodiorite and secondarily of Paradise Granodiorite. The Sierra Nevada range is the result of the uplift and erosion of these rocks along the Sierra Nevada frontal fault. The extremely steep eastern side of the range has contributed to the formation of a nearly continuous belt of alluvial fans along the mountainfront.

Since granitic basement rocks are not water-bearing, groundwater in these rock units is typically found only in the extensive lateral network of joints and fractures. The amount of groundwater in storage in these rock units tends to be low and permeability values vary greatly with the size of fractures. East of the mountainfront, in the area of Cabin Bar Ranch, the depth to basement rocks is unknown, since none were encountered in any of the maximum ±700-foot deep wells that have been drilled on-site. Other wells drilled in the Owens Lake bed have reportedly encountered up to several thousand feet of sediment, consisting principally of silts and clay, indicating that basement rock is deeper yet beneath the lake itself. Due to their relatively great depth in the project area, therefore, it is concluded that, these basement rocks do not represents a local source of groundwater for wells on Cabin Bar Ranch.[20]

[19] *Ibid, at pp. 50, 51.*

[20] *Ibid, at pp. 9-10.*

Alluvial Deposits

The availability and movement of groundwater in the project area is related to the ability of the underlying soil deposits to store, transmit, and yield groundwater to wells. The project area is predominantly underlain by alluvium, comprising granitic debris of various particle sizes ranging from sand to boulders, which has been eroded and transported by streams draining the mountains and discharging into Owens Lake. Moving east and away from the mountainfront, these alluvial deposits gradually give way to finer-grained sand, silt, clay, and evaporite lacustrine sediments deposited over time by Owens Lake, which once covered a considerably larger area.

The only other surficial geologic unit in the project area is colluvium, or larger rock and boulder deposits that have eroded from the Sierra Nevadas and traveled downslope over time. Colluvium does not occur on Cabin Bar Ranch.

Faulting

There are numerous faults within the alluvial fan deposits that extend eastward into the Cartago area and the project site from the various canyons of the Sierra Nevada range. This fault series is considered to belong to the Sierra Nevada Frontal Fault (SNFF) System, which was last thought to be active between 2.5 million and 10,000 years ago. The other locally prominent fault system is the Owens Valley Fault Zone (OVFZ), which extends southeast from Big Pine through Lone Pine and towards Owens Lake. The OVFZ is reportedly manifested by numerous lineaments at ground surface and by scarps that primarily occur east of Cabin Bar Ranch. Surface traces associated with the OVFZ are thought to have been active within the past 10,000 years. Cabin Bar Ranch is located between the OVFZ on the east and the SNFF on the west, but no surface expression of these faults have been reported on the property. [21]

Basic Groundwater Conditions

The alluvial deposits contain the major aquifer system within the southwestern portion of the Owens Valley Groundwater Basin. The water-bearing alluvial deposits that underlie the project area comprise the alluvial aquifer system, with the finer-grained silt, clay, and evaporite deposits associated with Owens Lake forming intervening aquitards, or zones of low permeability strata that impede or prevent the lateral movement of groundwater. Groundwater recharge of the alluvial aquifer system in the project area is generally from infiltration of direct precipitation and surface flows (i.e., runoff) conveyed by streams and creeks draining eastward from the Sierra Nevadas. Cartago Creek's headwaters are in the Sierra Nevada Mountains; the creek conveys flows from seasonal snowmelt and rainstorms flows directly into the project site, and serves as a major source of surface water replenishment for the shallow aquifer system. In addition to Cartago Creek, there are several other minor tributaries which originate at lower elevations in the Sierra Nevada Mountains, located to the north and south of Cartago Creek. These tributaries also contribute to recharge of the shallow aquifer system in the project area, as does subsurface inflow from fractured granitic rocks underlying the property.

[21] *Ibid, at pp. 10-17.*

(3) Conditions at Cabin Bar Ranch

Hydrogeologic Conditions

Previous hydrogeological investigations, including well drilling and construction, have been conducted on Cabin Bar Ranch as far back as 1978. The investigations have involved drilling and construction of monitoring wells, "test" wells and piezometers; drilling and construction of water-supply wells; preparation of geologic cross-sections to help define aquifers beneath Cabin Bar Ranch and adjacent properties; ongoing monitoring of water levels; performing aquifer tests in several different water wells; quantifying the aquifer parameters; providing estimates of groundwater recharge and underflow; and conducting different levels of groundwater modeling.[22] An investigation conducted by Geothermal Surveys, Inc. in 1982 identified four water supply wells (CBR-1 through CBR-4) on Cabin Bar Ranch at that time and noted the likely correlation of the line of natural springs with an on-site fault line termed the "Spring Line fault" that was considered a barrier to easterly groundwater flow.[23] The springs are believed to mark the line of contact beneath Cabin Bar Ranch between the water-bearing alluvial deposits and less permeable, finer-grained lakebed sediments. Subsequent investigations likewise noted the presence of numerous large and small springs on Cabin Bar Ranch, extending along a northwesterly-trending line starting nearly 2000 feet to the south in Olancha and crossing the Cabin Bar Ranch property approximately 1,000 feet east of Highway 395 within a zone varying from 50 to 100 feet in width. Geothermal Surveys, Inc.'s report recommended that future wells on Cabin Bar Ranch be located west of the fault line and draw shallow groundwater from within the permeable alluvial fan materials to minimize the risk of saltwater intrusion from Owens Lake.[24]

The locations of extant wells on Cabin Bar Ranch and on the Elton Lease Parcel to the south, together with wells constructed in the past but since destroyed, are depicted in **Figure 4.G-1**, *Well Location Map*. Hydrogeologic conditions are generally depicted in **Figure 4.G-2**, *Geologic Cross-Section, Cabin Bar Ranch Area*. (It should be noted that this figure represents an interpretation of subsurface geologic conditions, since there is no hard subsurface drilling data west of well PW-1 or east of monitoring well MW-1.) The Spring Line fault is shown in Figure 4.G-2, although the precise fault depth and/or angle are unknown. **Figure 4.G-3,** *Groundwater Flow Map for Shallow Zone Cabin Bar Ranch Area*, and **Figure 4.G-4,** *Groundwater Flow Map for Production Zone Cabin Bar Ranch Area*, illustrate the direction and extend of groundwater flow in the project area. **Figure 4.G-5,** *Hydrologic Areas of the Cabin Bar Ranch Region*, shows the area modeled for the proposed project.

As illustrated in Figure 4.G-2, previous investigations generally agree that there are at least three separate aquifer systems beneath the Cabin Bar Ranch property: a shallow aquifer zone, a principal aquifer, and a deep aquifer zone.[25] The shallow aquifer zone, characterized by a layer of fine-grained sand and gravel, is described in previous investigations as occupying the upper 150 feet of the sediments beneath Cabin Bar Ranch, and is underlain by and separated from the deeper aquifers by low-permeability materials (i.e., an aquitard that restricts but does not prevent groundwater movement) at depths ranging from 125 to 150 feet below ground surface (bgs). However, based on review of the results of previous investigations as well as

[22] *Ibid, at p. 50.*

[23] *Ibid at p. 50.*

[24] *Ibid, at p. 17.*

[25] *The principal aquifer is referred to in prior studies as the production zone, since it was investigated as a potential well water source by previous owners of Cabin Bar Ranch. Groundwater withdrawal is not proposed from this principal aquifer/production zone as part of the current proposed project.*

recent electric log data, the technical report prepared for the current proposed project concludes that the shallow aquifer extends to a depth of approximately 80 feet bgs, with the underlying aquitard between 80 and 100 feet bgs. The previous and current investigations generally conclude that this shallow aquifer lies entirely west of the Spring Line fault, with the underlying aquitard similarly extending westward from the fault at least as far as existing water supply well PW-1. The principal aquifer zone was estimated to be approximately 90 feet in thickness beneath the aquitard, and may not be distinct from the deep aquifer zone defined in other investigations (i.e., a hydrologically connected system of deep aquifers).

Existing Water Supply Wells, Monitoring Wells, and Springs

Extant wells on Cabin Bar Ranch, shown on Figure 4.G-1, previously referenced, include past production wells, domestic water wells, production wells currently used by the existing Crystal Geyser bottling plant in Olancha, test wells drilled and constructed to determine current hydrogeologic conditions on the property and the feasibility of the proposed project, groundwater level monitoring wells, and piezometers.

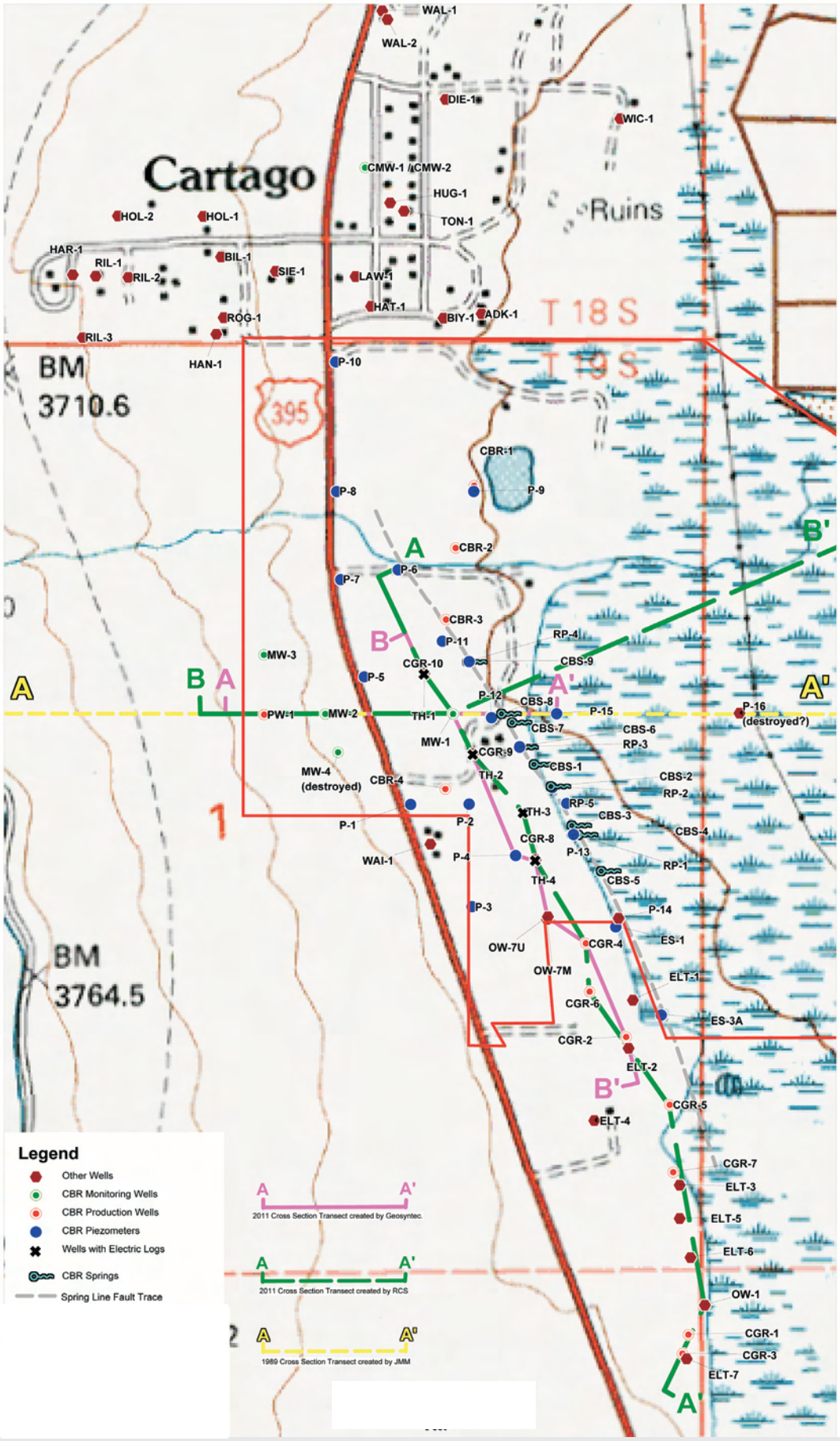
Four wells on the Elton Lease Parcel, CGR-2, CGR-3, CGR-4, and CGR-7, are currently pumped by Crystal Geyser to supply its existing Olancha bottling plant; CGR-2 ad CGR-7 supply process water for bottling, while CGR-3 and CGR-4 provide a limited amount of water for domestic use. There are several other privately-owned wells on the Elton Lease Parcel, including wells EW-1 through EW-8, two of which have been destroyed (EW-3 and EW-7). Three test wells, CGR-8, CGR-9, and CGR-10, were constructed by Geosyntec in 2010 for Crystal Geyser Roxane on the Cabin Bar Ranch property, for purposes of performing aquifer and water quality testing. The three wells were constructed to depths of between 53 and 73 feet bgs (i.e., the perforated intervals in the well pipes are located at these depths, with blank casings above this point) and therefore only withdraw from the shallow aquifer zone. These wells lie west of the Spring Line fault; the portion of Cabin Bar Ranch proposed as the project site and well CBR-1 lie east of the fault.

The off-site, privately-owned residential wells in Cartago to the north, depicted on Figure 4.G.1, also obtain their water supply from this same shallow aquifer system; however, the annual pumping volume of the residential wells in Cartago is not expected to be significant (i.e., less than one AFY per well). In addition, Cartago Municipal Water (CMW) Wells 1 and 2 have deeper perforations, extending below the aquitard at 80 to 100 feet and obtaining their water supply solely from the deeper aquifer system.

2. ENVIRONMENTAL IMPACTS

a. Methodology

As described in the Initial Study, **Appendix A** of this Draft EIR, the proposed project would not have a significant impact due to exposing people or structures to a significant risk from flooding, including flooding as a result of the failure of a levee or dam, or by inundation by seiche, tsunami or mudflow. In addition, the proposed project would have no impact to any housing or structures placed within a 100-year flood zone, as there are no such zones within the area. The analysis included here addresses potential impacts on hydrology and water quality. The analysis is based in part, on the *Hydrogeologic Evaluation for Crystal Geyser Roxane, Cabin Bar Ranch Water Bottling Facility Project, Inyo County, California*, prepared by Richard C. Slade & Associates, Consulting Groundwater Geologists, and included as **Appendix F** of this EIR. That report included a review of historical reports (from 1978 to 2011) prepared by at least six different independent firms that conducted earlier studies of surface and subsurface geologic and hydrogeologic conditions on the project site and surrounding properties.



N

0 1000 Feet

Well Location Map

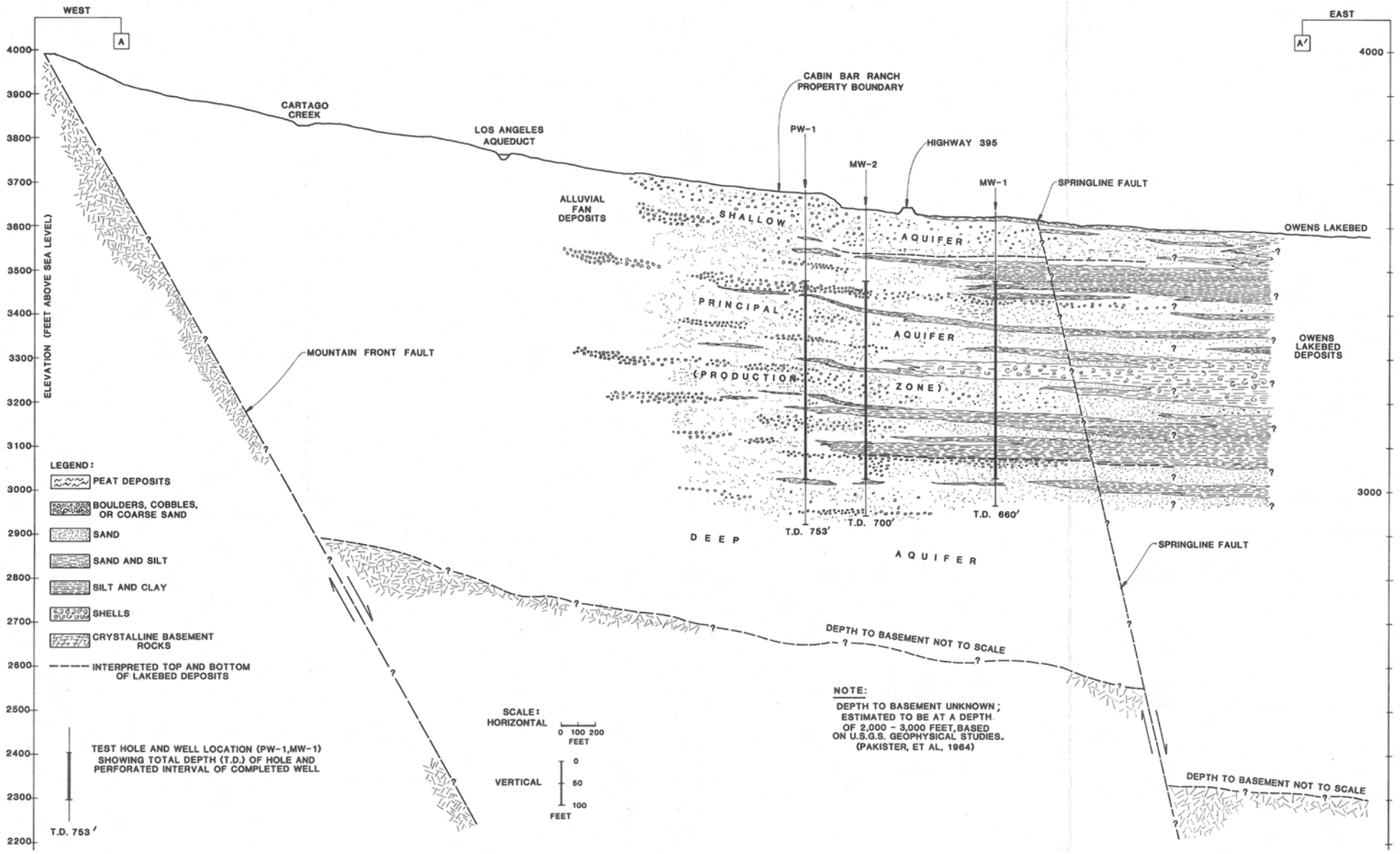
Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: Richard C. Slade & Associates LLC, 2012.

FIGURE

4.G-1

PCR



PCR

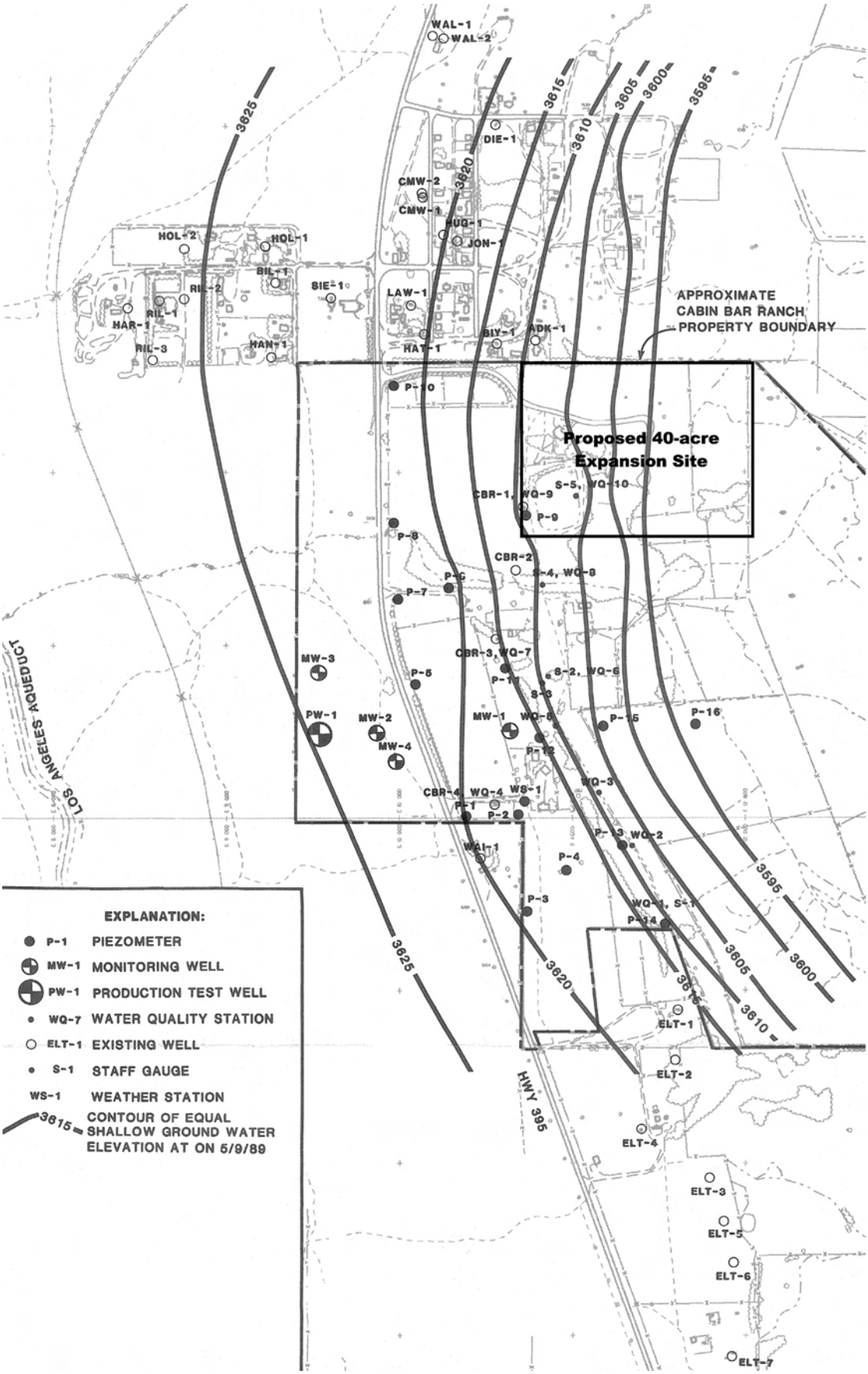
Geologic Cross Section
Cabin Bar Ranch Area

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: Richard C. Slade & Associates LLC, 2012.

FIGURE

4.G-2



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0 1000 Feet

PCR

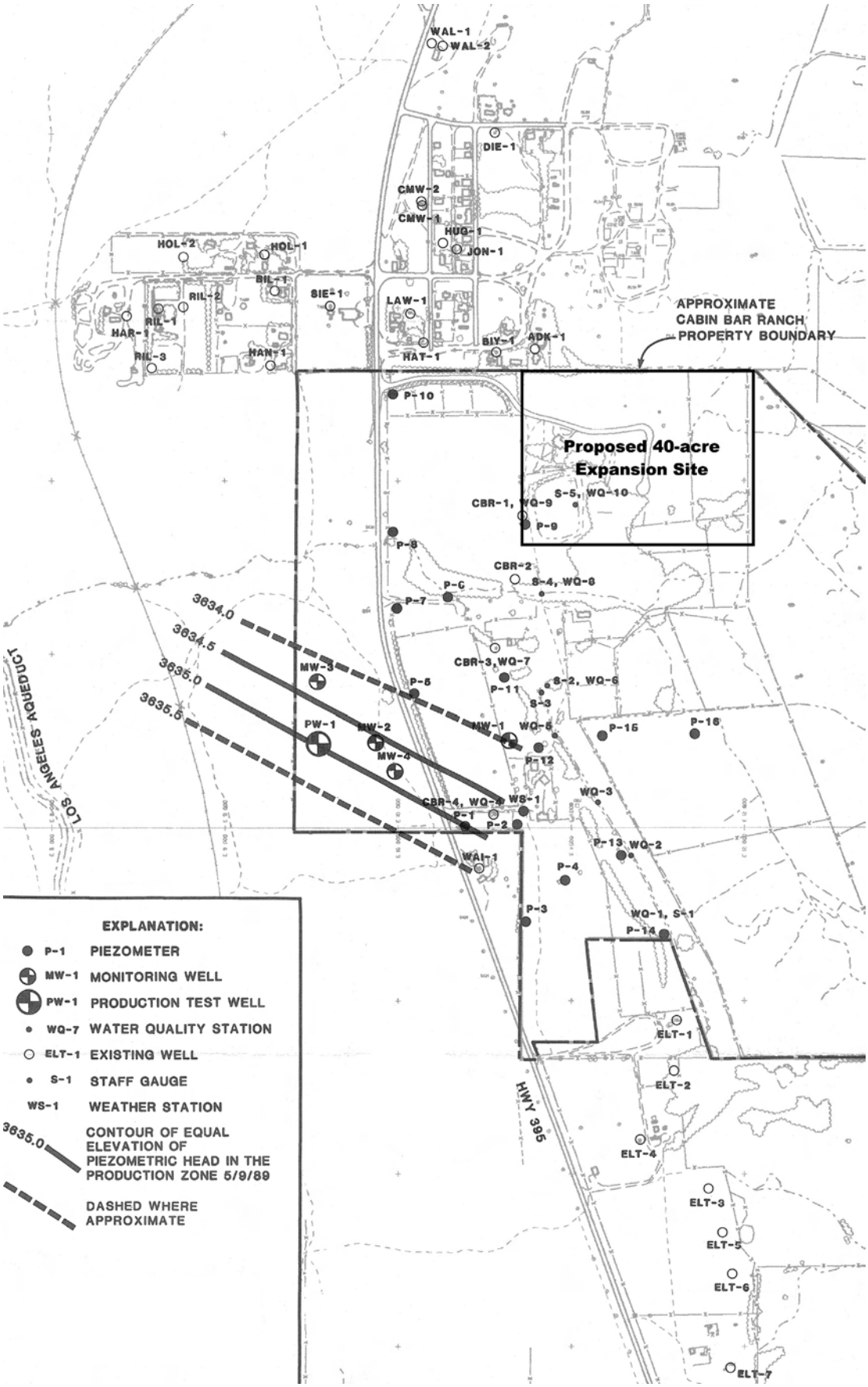
Groundwater Flow Map for Shallow Zone Cabin Bar Ranch Area

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: Richard C. Slade & Associates LLC, 2012.

FIGURE

4.G-3



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N

0 1000 Feet

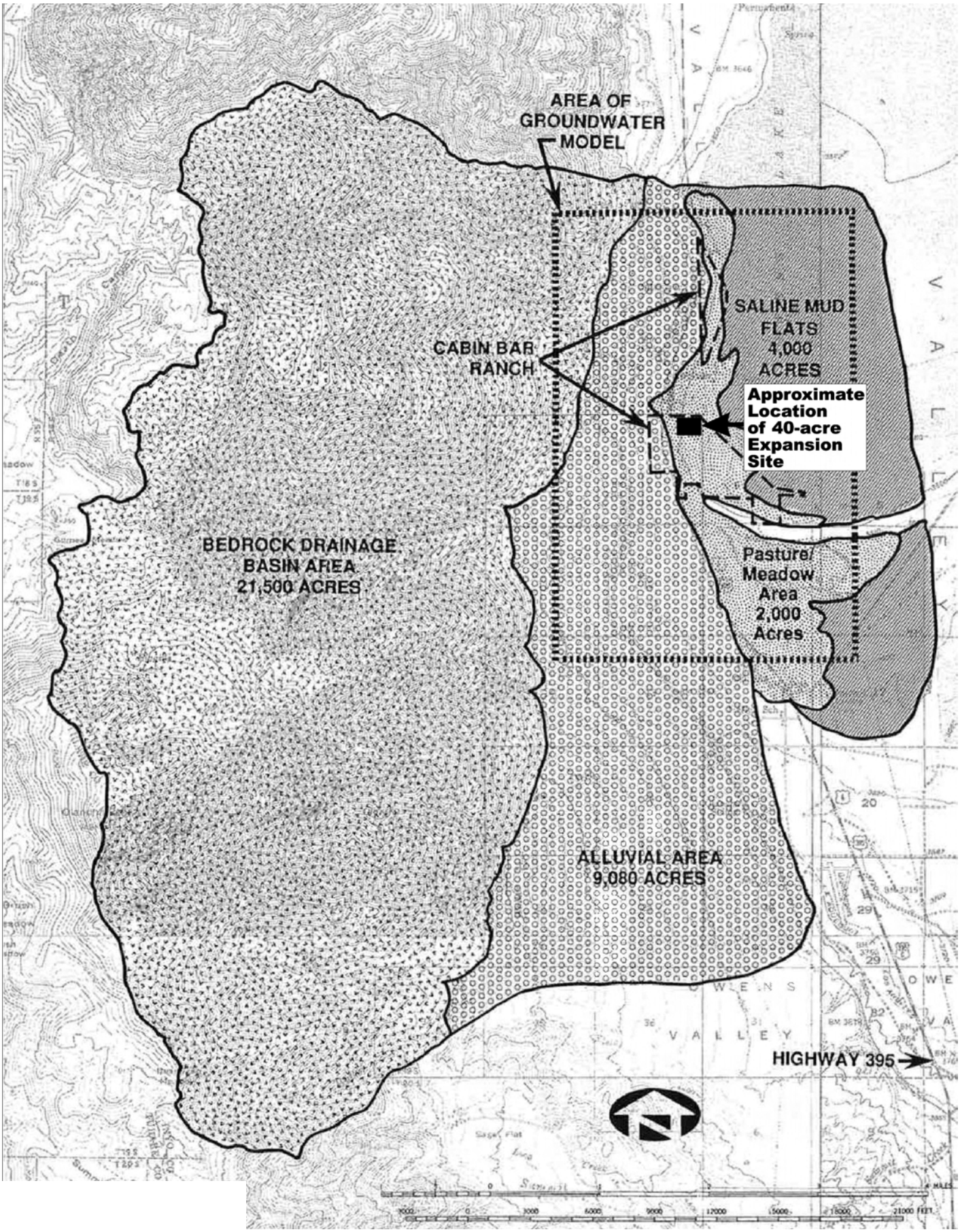
Groundwater Flow Map for Production Zone Cabin Bar Ranch Area

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: Richard C. Slade & Associates LLC, 2012.

FIGURE

4.G-4



PCR

Hydrologic Areas of the Cabin Bar Ranch Region

Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project

Source: Richard C. Slade & Associates LLC, 2012.

FIGURE

4.G-5

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b. Thresholds of Significance

Appendix G of the *CEQA Guidelines* contains the Initial Study Environmental Checklist form used during preparation of the project Initial Study (contained in **Appendix A** of this EIR). The Initial Study Environmental Checklist questions relating to hydrology have been utilized as the thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

HYDRO-1: Violate any water quality standards or waste discharge requirements.

HYDRO-2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

HYDRO-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.

HYDRO-4: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

HYDRO-5: Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

HYDRO-6: Otherwise substantially degrade water quality.

The remaining Environmental Checklist questions pertaining to Hydrology and Water Quality address flood hazards and inundation by seiche, tsunami, and mudflow. The Initial Study determined that the project would result in No Impact or a Less Than Significant Impact in response to these questions and no further analysis would be required in this Draft EIR. The Initial Study determinations are briefly summarized in **Section 6.0,** *Other Environmental Considerations* (subsection C, Effects Found Not To Be Significant), in this Draft EIR.

c. Project Features

(1) Leach Mound System

The project would not be connected to a public sewer system, as there is no central utility for wastewater discharge servicing the project site or the neighboring community of Cartago. The wastewater pipes previously installed under Cabin Bar Ranch Road as part of the unrealized 1982 subdivision would be removed during project construction, and therefore project-related wastewater would need to be disposed of on-site. A septic tank is proposed for the primary treatment of domestic effluent from the site (e.g., restrooms, employee break area), with a leach mound system proposed for secondary treatment.

The leach mound would be located east of the planned bottling facility and would be designed to avoid contamination of groundwater resources. An accepted method for secondary treatment of wastewater prior to contact with groundwater, the leach mound would provide a minimum of five feet of soil or sand between the bottom of the leach rock and the highest groundwater levels. Pressurized leach lines would be located at the top of the mound in a bed of gravel and would be supplied from a pump located in the septic tank. Below the gravel layer, a minimum of two feet of sand would treat and filter effluent to remove suspended solids. The system would be sized to accommodate a one-gallon-per-square-foot-per-day application rate of wastewater to the sand. The base area of the mound would be sized according to the allowable application rate of effluent into the existing surficial soils, as determined by percolation testing. The leach mound system design for the proposed project would be reviewed and permitted by Inyo County Environmental Health Department prior to installation.

(2) Stormwater Detention Basin

The project proposes a stormwater detention basin designed to detain stormwater flows from the project site as well as a small amount of rinsewater from filter cleaning operations associated with the bottling facility. The stormwater detention basin would be located east of the proposed bottling plant and would detain stormwater surface flows from the developed, impervious portions of the project site (i.e., where impervious surfaces replace natural surfaces). In accordance with LRWQCB standards, the stormwater detention basin would be designed so that no increase in stormwater flows is discharged off-site following completion of the proposed project, compared to existing conditions. The basin would be designed in accordance with the applicable water quality regulations of the LRWQCB. Specifically, the stormwater detention basin would be designed to retain runoff from a design storm event producing approximately 0.47 inch of precipitation and would be protected with rip-rap or another material designed to eliminate the possibility of erosion at the detention basin outflow.

Approximately once every two to three months, the proposed bottling plant's ceramic filtration system would be cleaned with non-toxic cleaning agents. The wastewater from this cleaning operation would be transferred to a holding tank where the pH would be balanced, and then ultimately discharged into the proposed stormwater detention basin. Additionally, a minimal amount of process water (i.e., water that gets spilled during bottling operations) would be discharged to the stormwater basin. The operation of the proposed stormwater detention basin would require a permit from the LRWQCB. The stormwater basin would also comply with Inyo County standards, and would be approved by the Inyo County Public Works (Building and Safety) Department.

d. Analysis of Project Impacts

(1) Water Quality and Waste Discharge

HYDRO-1: Will the proposed project violate any water quality standards or waste discharge requirements?

Construction

Construction of the proposed project would involve site preparation activities including site preparation, demolition, grading and installation of utility lines. Such activities would temporarily alter the existing drainage patterns and water flows within the project site. During construction, an estimated 12,600 cubic yards of grading would occur. The proposed project has been designed to balance all on-site cut and fill, and no material would be exported from the site during construction. Construction staging and stockpiling would all occur on-site. Exposed and stockpiled soils could be subject to erosion and conveyance across the site

during storm events. In addition, on-site watering activities to reduce airborne dust could contribute to pollutant loading in runoff. However, as the construction site would be greater than one acre, the project would be required to obtain a NPDES General Construction Activity Permit. In accordance with the requirements of the permit, the project would implement a SWPPP, which would specify BMPs and erosion control measures to be used during construction to prevent pollution. BMPs could include, but are not limited to the temporary use of erosion-control fencing, settling basins to remove sediment and contaminants, straw bale check dams and dikes, rock rip-rap, covering excavated and stockpiled soils with secured tarps or plastic sheeting, properly maintaining construction equipment, and stabilized construction entrances and exits. These and other BMPs would eliminate or reduce pollutant levels in runoff during construction, consistent with regulatory requirements. In addition, any impacts would be short-term in nature, as this first phase of construction is estimated to take approximately two months. With compliance with NPDES requirements, construction-related impacts to hydrology (water quality and waste discharge) would be less than significant.

Operation

(i) Leach Mound

As described above, since the proposed project would not be connected to a public sewer system, project-related wastewater would need to be disposed of on-site. A septic tank is proposed for the primary treatment of domestic effluent from the site (e.g., restrooms, employee break area), with a leach mound system proposed for secondary treatment. The leach mound system design for the proposed project would be designed by a California-registered civil engineer and reviewed and permitted by Inyo County Environmental Health Department and prior to construction and installation.

(ii) Stormwater Detention Basin

As described above, the stormwater detention basin would be designed to facilitate the existing stormwater flow patterns across the project site, with stormwater collected from the area west of the basin and conveyed downslope (east) towards Owens Dry Lake. The detention basin would also receive a small amount of rinsewater from filter cleaning operations associated with the bottling facility. The basin would also be designed in accordance with the applicable water quality regulations of the LRWQCB, so that no increase in stormwater flows is discharged off-site following completion of the proposed project construction. Operation of the proposed stormwater detention basin would also require a permit from the LRWQCB, would require compliance with Inyo County standards, and would be approved by the Inyo County Public Works (Building and Safety) Department. Based on the above, operational impacts to hydrology (water quality and waste discharge) would be less than significant.

(2) Groundwater Supply and Recharge

HYDRO-2: Will the proposed project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Construction

Construction of the proposed project will occur in three phases over a period of up to 15 years, as described in Section 2.0, *Project Description*, of this Draft EIR. Phase I would entail the construction of a 106,500-square foot portion of the water bottling facility, which would include two bottling lines, four loading docks,

construction of the new permanent access road, stormwater detention basin, leach mount system, fire suppression systems and emergency access roads, and additional demolition of structures and other site preparation. Phase I would be in operation for between five and nine years prior to the construction of Phase II, which would construct a 92,000-square foot addition to the bottling facility, two additional bottling lines, and four additional loading docks. Construction of Phase II is anticipated to occur between 2019 and 2021, with construction of the fourth and final bottling line anticipated in 2024 or 2025. Phase III would construct a 40,000-square foot storage warehouse, and it could be constructed between 2025 and 2027, or prior to Phase II if additional storage space is needed prior to an increase in water bottling production.

Impacts to groundwater supplies and interference with groundwater recharge during construction would be limited, since construction would occur intermittently over the course of up to 15 years. Construction activities would require a limited amount of water use, for dust control, cleaning and other related activities. Water for construction related activities would be pumped from the existing CGR-6 well and no new wells would need to be drilled for this purpose. Water use would be short term in nature and years apart during the three phases of project development. Construction-related impacts to groundwater supplies would therefore be less than significant.

Operation

(i) Proposed Project Water Demand

Existing wells CGR-8, CGR-9 and CGR-10, located west of the Spring Line fault but proximal to the proposed project site, are proposed to provide the entire supply of production water for the new bottling facility. These wells are planned to eventually produce a total of 360 acre-feet (AF) per year of groundwater from the shallow aquifer system, once the water bottling plant has been fully built out. If pumped on a continuous basis (24 hours per day, 365 days per year), then each of the three wells would need to pump at a constant rate of 75 gallons per minute (gpm). During the summer months, groundwater production could be temporarily increased for up to three months (90 days) to meet increased seasonal demand for bottled water. During this short-term, high-production scenario, a total of 200 AF of water could be pumped from the wells. After this 90-day period, the remaining 160 AF of the total estimated demand would be pumped from the same wells during the remaining nine months of each year. However, this is considered a conservative scenario that may overestimate the volume of groundwater to be pumped during this 90-day period, and in any event does not represent the year-round pumping levels.

As previously stated, the three on-site wells proposed for project-related production, CGR-8, CGR-9, and CGR-10, are each perforated entirely within the shallow aquifer system, and as such, derive their supply solely from this system. With the exception of pumping tests performed on the three wells in late 2010, none of the wells have previously been pumped to supply groundwater for any use.

Domestic potable water for employees of the proposed water bottling plant would be provided by on-site domestic groundwater well CBR-1. There is currently no existing public water system available for the site; however, existing domestic well CBR-1 is connected to the site through existing underground water lines, which was previously permitted by the Inyo County Environmental Health Services Department. Under the proposed project, portions of the existing water line extending from CBR-1 under Cabin Bar Ranch Road would be realigned and extended to the proposed bottling facility. If portions of the existing water lines to be retained are found to be in a degraded condition or are otherwise deficient, they would also be replaced as necessary. Since the proposed on-site domestic potable water system would serve more than 25 employees (approximately 35 to 50 employees at full build-out), it would be designed to meet Inyo County

water quality standards for a public water system. The volume of water to be pumped from this well is relatively small and impacts on groundwater recharge and off-site wells would be less than significant.

(ii) Spring Flows

Aquifer testing was conducted to determine impacts from pumping tests at CGR-8, CGR-9 and CGR-10 on springs sites denoted as ES-1, ES-3A, CBS-2, CBS-4, CBS-6 and CBS-9. Testing was conducted for a period of 72 hours at a constant pumping rate of 170 gpm in each well. For CGR-8 aquifer testing, the springs generally decreased in flow near the end of each test, ranging in a decrease of 0.31 gpm to 2.05 gpm (or 7 percent to 52 percent of pre-test flow) for each of these springs. ES-3A, the farthest and southernmost spring, actually exhibited an increase in flow by approximately 11.6 gmp (or 12.4 percent increase from pre-test flow). For CGR-9 aquifer testing, the springs also showed decreases, with the exception of ES-1, which showed no change. The decreases in flow ranged from 0.29 gpm to 3.94 gpm (or 2 percent to 44 percent of pre-test flow). For CGR-10 aquifer testing, springs CBS-2, CBS-6 and CBS-9 exhibited decreased flows ranging from 0.6 gpm to 4.3 gpm (or 25 percent to 47 percent of pre-test flow); CBS-4 had no change in flow; and ES-1 and ES-3A had a net increase in flow of 0.8 gpm and 4.9 gpm (or 11.4 percent and 4.6 percent increase from pre-test flow, respectively).

Subsequent modeling assumed a more realistic operational scenario for the proposed facility, with a total groundwater production of 360 AF per year. This scenario was intended to model long-term impacts on groundwater levels and spring flow volumes, based on average pumping rates and steady state conditions. Under this scenario, wells CGR-8, CGR-9 and CGR-10 would be pumped at rates of 67 gpm, and a fourth domestic supply well would be pumped at 22.4 gpm. Based on this scenario, modeling suggested that spring flows could be decreased by up to 17.6 percent as the result of project-related groundwater pumping. In addition, groundwater levels were modeled to be slightly lower at two on-site water level monitoring points as the result of pumping.

Additional groundwater simulation modeling was again conducted, in an effort to predict the potential impact on nearby springs along the Spring Line fault, assuming a short-term high production scenario. This modeling evaluated pumping of the on-site wells assuming the conservative maximum demand of 200 AF over a 90-day period, thus simulating short-term high production demands that would take place during the summer months. For this scenario, the maximum combined pumping rate for on-site wells was set at 500 gpm, including 150 gpm from each of the three existing wells (CGR-8, CGR-9 and CGR-10), and 50 gpm from the domestic supply well. The results of this simulation revealed that the total flow to the Spring Line fault springs could be reduced by up to 39 percent. However, it should be noted that under this scenario, production from these wells would be decreased for the remaining nine months of each year to satisfy the remaining annual demand of 160 AF. Under these conditions, the increased demand is only temporary, and following the summer period, recharge to the aquifer system will be at its highest during winter and spring months. As such, the shallow aquifer system is expected to be able to recover to pre-summer conditions.

(iii) Groundwater Quality

Limited data exists regarding the nature of current water quality in the shallow and deep aquifers beneath the property; however, it is clear that the water quality is appropriate for use as a source for bottled water, and nearby residents have been using groundwater from shallow and deep wells for their own private domestic use for many years. Further, CMW does not have an on-site water treatment facility, as would normally be required by the California Department of Public Health, if their groundwater did not meet the quality standards for public use. Based on the water quality and water level results generated during prior pumping tests of water wells on the project site, the saline groundwater within the fine-grained sediments

located east of the Spring Line fault will not move west across or through the fault into the coarser-grained alluvial deposits that lie west of the fault.

(iv) Groundwater Storage and Recharge

Water level hydrographs of static water level data from piezometers and groundwater monitoring wells in the area of Cabin Bar Ranch revealed that water levels tend to be shallow, ranging from ground surface (i.e., artesian) to a depth of 24 feet bgs. Hydrographs prepared for this project showed that static water levels in the CGR wells tend to follow rainfall patterns since the beginning of data collection in 1996, indicating that these levels appear to naturally rise and decline in response to changes in seasonal rainfall. As such, evidence suggests that rainfall and infiltration of runoff along creeks and streams emanating from the Sierra Nevada Mountains to the west are the current, major influences impacting static water levels in the wells. As water levels in the shallow aquifer system have been relatively shallow, even achieving artesian conditions at ground surface, and due to the display of a direct response to rainfall patterns, it can be inferred that the pumping of existing CGR wells has had no detrimental impact on water levels to date in the shallow aquifer system. Importantly, none of the hydrographs show any evidence of a continuous, progressive or increasing decline trend in water levels over time in any well.

RSC's 2012 *Hydrogelogic Evaluation* states that groundwater recharge in the region takes place through infiltration of direct precipitation as well as infiltration of surface water runoff along creeks and streams emanating from the Sierra Nevada Mountains to the west. Calculation of the amount of groundwater in storage in the alluvial aquifer system for the area bounded by the project site and to the west side of the Spring Line fault was performed, in order to determine the total amount of groundwater in storage at any given point in time. The purpose was to compare the calculated value to the total planned amount of groundwater to be produced by CGR-8, CGR-9 and CGR-10 (360 AF per year). A total volume of 1,148 AF of groundwater was estimated to be currently stored in the shallow aquifer system beneath that portion of Cabin Bar Ranch that lies west of the Spring Line fault. The total amount of groundwater planned to be pumped from the three wells represents 31 percent of the total amount of groundwater currently in storage. However, the amount of groundwater pumped would be replenished by surface water recharging the alluvial aquifer system. Prior hydrogeologic studies estimated annual recharge volumes for the shallow aquifer to be 6,700 AFY and 7,500 AFY, respectively, for the shallow and deep aquifers. As such, the planned amount of production will be readily replenished on an average annual basis by this recharge water.

As previously stated, the off-site residential wells to the north in Cartago also obtain their water supply from the shallow aquifer system; however, the annual pumping volume of these is not expected to be significant (i.e., less than one AFY per well). In addition, the Cartago municipal wells were constructed with deeper perforations, and draw groundwater solely from the deeper aquifer system. As such, pumping of CGR-8, CGR-9, and CGR-10 for the proposed project is not expected to significantly impact these wells.

(v) Groundwater Underflow and Impact of Pumping

Calculation of groundwater underflow was performed for a cross-sectional area within the shallow alluvial aquifer system, perpendicular to groundwater flow direction. Along a cross-section extending south from the Spring Line fault through CGR-10 and CGR-9 to a point west of CGR-8, the groundwater underflow was determined to range from 1,310 AFY to 1,520 AFY. Based on a total anticipated production capacity of 360 AFY, the proposed amount of pumped water ranges from 23 to 28 percent of the total groundwater underflow through the shallow alluvial aquifer system in this area. This does not include additional underflow in the deep aquifer system(s) lying below the shallow aquifer system. The deeper system(s) has its own additional component of groundwater underflow that would not be utilized by the three production

wells in the future. Leakage through the aquitard beneath the shallow aquifer zone has been demonstrated by previous investigations; the shallow and deep zones are not thought to be completely separated. Groundwater in the deeper zones will, to some extent, recharge groundwater in the shallow zone, and the underflow is estimated to be minimal.

The existing Crystal Geyser water bottling facility in Olancha utilizes two additional wells for current production – CGR-2 and CGR-7. These wells pump groundwater from the same shallow aquifer system that the CGR-8, CGR-9 and CGR-10 will use. As such, the total impact of the combined pumping of all production wells was calculated. As CGR-2 and CGR-7 are located farther to the south, the cross-section area was increased to encompass these wells. The maximum amount of water produced from CGR-2 and CGR-7 is reported to be approximately 325 AF per year, and when added to the proposed amount to be pumped from the five wells combined, a total of 685 AF per year would be pumped from the shallow aquifer at full future capacity. The total amount of groundwater underflow in the shallow aquifer system through the entire area between the Spring Line fault southward through to a point located west of CGR-2, was calculated to range from approximately 1,600 AF per year to 1,850 AF per year. As such, the total amount of groundwater to be obtained from the shallow aquifer in the future, at full plant capacity for both the existing facility in Olancha and the proposed project, ranges from 38 percent to 43 percent of the total amount of shallow groundwater underflow estimated to occur in this area. However, operation of CGR-2 and CGR-7 appear to have little to no impact on the current groundwater conditions, since no long-term trend of lowered groundwater levels has been observed, and artesian conditions (i.e., flow at ground surface) are observed on the property after rainstorms.

(vi) Water Level Drawdown Impacts

A calculation (simulation) of the impact (induced water level drawdown) of pumping wells CGR-8, CGR-9 and CGR-10 on water levels in other monitoring wells and water supply wells, was performed on a continuous pumping rate of 75 gpm for each well (a combined rate of 225 gpm), for 30 days and up to a maximum period of 360 days. The results of the calculation of water level drawdown in the piezometers, monitoring wells and water supply wells perforated only in the shallow aquifer system, revealed that near the southern boundary of the property (at CGR-2 and CGR-3), a maximum theoretical drawdown of 0.54 feet would take place after 30 days of pumping, whereas at the northern boundary of Cabin Bar Ranch (at piezometer P-10), the maximum theoretical drawdown induced in a well at that location would be 0.87 feet after 360 days of continuous pumping. Long-term field monitoring of water levels during actual pumping tests, on other projects, suggests that calculated water level drawdown values are invariably greater, sometimes significantly so, than actual drawdown values recorded in the field. Previous investigations determined that water level drawdown impacts ranged from 0.20 feet to 0.06 feet in other wells in the region, and these results are considered more representative of aquifer conditions in the project area. These previous investigations used more sophisticated methodologies than RSC's 2012 *Hydrologic Investigation*, and are assumed to be valid for purposes of the proposed project and present analysis.

Based on the above, operational impacts to groundwater supplies and groundwater recharge, as a result of proposed project implementation, would be less than significant.

(3) Surface Hydrology

HYDRO-3: Will the proposed project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

HYDRO-4: Will the proposed project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

HYDRO-5: Will the proposed project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Construction

As described above, the proposed project would not alter the existing drainage pattern of the site or alter the course of a stream or river in a manner which would result in erosion or siltation on- or off-site. Any impacts to surface drainage during project construction would be temporary in nature (approximately two months), and would be controlled by a LRWQCB-approved SWPPP. As such, construction-related impacts surface hydrology would be less than significant.

Operation

The proposed project would construct a water bottling facility, storage warehouse, a new permanent access road and a parking and truck staging area. Operation of these facilities would create new impervious surfaces on relatively undeveloped, rural land, and there are currently no existing or planned stormwater drainage systems in Cartago. As described above, the stormwater detention basin would be designed to capture wastewater/process water and control stormwater flow patterns across the site, in accordance with LRWQCB standards. In addition, the stormwater detention basin would be designed so that no increase in stormwater flows is discharged off-site during project operation, as it would be protected by rip-rap or another material designed to eliminate the possibility of erosion at the detention basin outflow. As such, operational impacts to surface hydrology would be less than significant.

HYDRO -6: Will the proposed project otherwise substantially degrade water quality?

Construction

Construction of the proposed project will not otherwise substantially degrade water quality. As described above, during construction, the proposed project will implement and be subject to the requirements of a LRWQCB-approved SWPPP. Approved BMPs will be will be utilized to effectively control degradation of water quality due to short-term construction activities. As such, construction-related impacts to water quality will be less than significant.

Operation

Operation of the proposed project will not otherwise substantially degrade water quality. As described above, a leach mound system will be designed and permitted in accordance with Inyo County Environmental Health Department standards, and a stormwater detention basin will be designed and permitted in accordance with Inyo County Public Works Department and LRWQCB. With implementation of these proposed project features, water quality pollutants would be reduced or eliminated, and the project would comply with all applicable regulatory requirements. Therefore, impacts associated with water quality would be less than significant.

3. MITIGATION MEASURES

Although proposed groundwater withdrawal was determined to result in less than significant impacts with respect to groundwater or surface water hydrology and no mitigation measures are required, the following recommendations contained in the *Hydrogeologic Evaluation* prepared by project hydrogeologists Richard C. Slade & Associates are required as part of project implementation.

Mitigation Measure HYDRO-1: During the initial sequential activation of the first two production lines after Phase I building has been completed, all three wells shall be utilized so that the total groundwater demand is spread between the three wells, as opposed to pumping only one well at full capacity while leaving the other two wells idle. This will mitigate water level drawdown impacts in the vicinity of any one pumping well. During the initial phase-in period, with all three wells in operation, the actual effect of the pumping on water levels shall be evaluated by conducting water-level monitoring in piezometers, springs and groundwater monitoring wells in the surrounding area.

Mitigation Measure HYDRO-2: A regular program of data collection and database maintenance shall be undertaken to develop a long-term data set that can be reviewed for changes in groundwater conditions over time. Data collection efforts shall include the following:

- For all wells on Cabin Bar Ranch that are currently pumped or are proposed to be pumped in the future, Crystal Geyser Roxane shall install meters inside their facility buildings (for security and/or maintenance reasons) or at the wellheads. Meters shall be equipped with properly calibrated and accurately-reading flow meters that read in both instantaneous flow (in gpm) and total flow (in gallons or AF), and that are located at a proper location on the discharge pipe near each wellhead. The totalizer flow dial data shall be monitored and recorded on a regular basis (i.e., at each well at least once each week). Flow meters shall be placed on each pumping well to allow for a more accurate determination of the amounts of groundwater to be pumped from CGR-8, CGR-9, and CGR-10, and also the amount currently pumped from the existing active plant wells (CGR-2 and CGR-7) and the two active domestic supply wells for the plant (CGR-3 and CGR-4).
- Two active plant wells, CGR-2 and CGR-7, are equipped with pressure transducers which provide continuous monitoring of SWLs. Wells CGR-3 and CGR-4 shall be equipped with pressure transducers as well.
- To monitor future water levels near the northern boundary of the proposed facility, well CBR-1 (the proposed domestic production well), located approximately 1,070 feet northeast of CGR-10, shall be equipped with a transducer to continuously record water levels. The well casing for CBR-1 is perforated between 60 and 120 feet bgs; these depths are in the same general perforation zones of CGR-8, CGR-9 and CGR-10 (53 feet to 88 feet bgs). Monitoring of the water levels in this on-site domestic-supply well would yield data on possible changes in the water levels that might be caused, as a result of the proposed pumping, on shallow off-site wells north and northwest of the facility.
- In addition to collection of water level data via transducers, all active wells, inactive wells, observation or monitoring wells, and piezometers on Cabin Bar Ranch shall be manually measured and water levels recorded on a monthly basis. These data shall be tabulated including a listing of the date and time of measurement, the depth to water bgs, the respective groundwater elevation, and the current operating status of each

well (static or pumping condition). If a well is pumping, a measurement for a SWL shall be collected 24 hours after shutdown of pumping in that well. As an alternative to manual measurements, a Supervisory Control and Data Acquisition (SCADA) system may be set up to record SWLs in CGR wells on a daily basis, twice each day (say at 8:00 AM and 8:00 PM), with the date, time, and depth to water measurements. These data shall be preserved for later review, graphing and analysis.

- Little long-term and regularly scheduled water quality data was available from the wells that could be analyzed for selected key water quality constituents, such as the general minerals (e.g. the common cations and anions) and inorganic chemicals (trace elements). To establish a database where possible long-term trends and changes in water quality may be evaluated, groundwater samples shall be collected at least once every three years from the pumping wells and key groundwater monitoring wells for analysis of physical constituents (e.g. temperature, electrical conductivity, turbidity, pH; general minerals, trace metals; and the radiological constituents is recommended.

Mitigation Measure HYDRO-3: After data has been collected for each phase of development, the project applicant shall retain qualified groundwater professionals to evaluate water quality. Since pumping is conducted continuously and groundwater conditions change, due to external factors (such as changes in rainfall), this data will allow the proposed pumping program to be modified to adjust to changes in conditions prior to increasing groundwater withdrawal to expand production. Examples of such data review and interpretation may include, but not be limited to, the following:

- Plot the production quantities from each well, along with rainfall and SWLs, in order to assess the impact of pumping on SWLs in all monitored sites.
- Changes in spring flow over time shall be plotted against total pumping of the three wells and changes in rainfall over time.
- Plot temporal changes in key water quality constituents in groundwater samples from the wells. Typical key water quality constituents include total dissolved solids, electrical conductivity, color and selected cations and anions, such as calcium, magnesium, sodium and boron and bicarbonate, sulfate and chlorides. Tracking changes in these constituents in those wells close to the fault will provide indication of any possible intrusion of any water quality from the east side of the fault into the sediments on the west side.

4. CUMULATIVE IMPACTS

As discussed below, there are eight related projects in the vicinity of the proposed project (the Owens Valley). These projects could potentially increase the volume of stormwater runoff and contribute to pollutant loading in stormwater runoff, resulting in cumulative impacts to hydrology and water quality. However, as with the proposed project, the related projects would be subject to State NPDES permit requirements for both construction and operation. Each project greater than one-acre in size would be required to develop a SWPPP and would be evaluated individually to determine appropriate BMPs and treatment measures to avoid impacts to water quality. In addition, the Inyo County Public Works Department reviews all construction projects on a case-by-case basis to ensure that impacts to local and regional hydrology would be properly managed. The proposed project, considered together with related projects, would result in a less than cumulatively considerable contribution to cumulatively significant hydrology and water quality impacts. Throughout the Owens Valley, the following are ongoing and planned environmental mitigation and other development projects in the region.

a. LADWP's Owens Lake Dust Mitigation Program

LADWP's Owens Lake Dust Mitigation Program is a result of the Memorandum of Agreement (MOA) between the City of Los Angeles and the Great Basin Unified Air Pollution Control District (GBUAPCD), to mitigate air quality impacts from particulate matter which is emitted from the surface of Owens Lake. Since 2001, LADWP has already completed approximately 40 square miles of dust control measures. The SIP will demonstrate that upon the completion of the dust mitigation program, emissions from Owens Lake will be reduced to the point that the Owens Valley Planning Area would attain National Ambient Air Quality Standards for particulate matter (PM10) by the end of 2012. Three methods of dust control are permitted under the MOA for LADWP's use on Owens Lake – shallow flooding, managed vegetation and gravel.[26]

The most water-intensive dust control method is shallow flooding. Water for shallow flooding dust control is obtained from two openings in the Los Angeles Aqueduct and is piped directly under the lakebed surface for application to the most emissive areas of Owens Lake. Water for the Owens Lake Dust Mitigation Program is not obtained from groundwater pumping, and therefore would not contribute to the withdrawal of groundwater from the shallow aquifer that would serve as the source of production water for the proposed project.

b. LADWP's Southern Owens Valley Solar Ranch Project

LADWP issued a Notice of Preparation for a Draft EIR for the Southern Owens Valley Solar Ranch (SOVSR) project, on September 30, 2010. The project involves the development of a net generation capacity of 200 megawatts of solar photovoltaic electrical energy and associated equipment covering approximately 1,600 acres of a 3,100-acre site within the southern Owens Valley in Inyo County.[27] The primary drainage feature in the project areas is the Owens River, which flows in a southerly direction adjacent to the proposed sites towards Owens Lake. In general surface runoff from the project suites would flow towards the river. The proposed solar project would result in changes to the project sites that could affect existing drainage systems and surface water quality. Grading of the site and removal of vegetation could increase the amount of stormwater runoff and could affect water quality through increased potential for erosion. A number of minor drainages flow over the project sites, and these drainages will be evaluated for jurisdictional features that would make them subject to regulatory permitting from either state or federal agencies. Impacts on flooding and flood plains will also be evaluated. Appropriate BMPs aimed at reducing water quality and runoff effects will be considered for application to the proposed project. The proposed SOVSR would not be a water-intensive use, and each project would employ approved BMPs to minimize impacts to water quality.

c. LADWP's Lower Owens River Project

LADWP's Lower Owens River Project (LORP) is ecosystem mitigation plan for certain water gathering activities undertaken by LADWP from 1970 to 1990. The LORP implements applicable provisions of the 1991 Inyo County/Los Angeles Long Term Water Agreement and a subsequent Memorandum of Understanding. The MOU requires Inyo County and LADWP to implement the LORP through specific action

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[26] *Los Angeles Department of Water and Power, Owens Lake Dust Mitigation Program; https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-water/a-w-losangelesaqueduct/a-w-laa-owenslake?_adf.ctrl-state=cwpi69vco_4&_afrLoop=219703636711574; accessed May 2012.*

[27] *Los Angeles Department of Water and Power, Environmental Reports, Notice of Preparation of the Draft EIR for the Southern Owens Valley Solar Ranch, September 30, 2010; https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-financesandreports/a-fr-reports/a-fr-r-environmentreports?_adf.ctrl-state=cwpi69vco_282&_afrLoop=221513251613574; accessed May 2012.*

plans for the (1) Lower Owens River Riverine-Riparian Ecosystem, (2) the Owens River Delta Habitat Area, (3) Off-River Lakes and Ponds, and (4) the Blackrock Waterfowl Habitat Area.[28] Water for these habitat restoration projects will originate at the Los Angeles Aqueduct, which would strategically increase flow of the Owens River for environmental mitigation. The water used for LORP purposes would in some instances increase groundwater recharge, as the increased river flow would enter the unconfined shallow aquifers next to and under the Owens River. Some hydrology impacts would occur as a result of the LORP, including the stirring of river sediment due to initial release increased river flow velocity, potential overflowing of river banks and instances of increased water quality degradation; however, most of these potential impacts can be effectively mitigated. Nevertheless, when considered in conjunction with the proposed project, there would be no cumulatively considerable impacts to hydrology, as the LORP is an ecosystem mitigation program intended to eventually improve hydrologic conditions along the Owens River.

d. LADWP's Owens Lake Master Plan

LADWP's Owens Lake Master Plan (Master Plan) provides a framework to manage the diverse resources of Owens Lake, while continuing to control dust emissions from its surface. A diverse group of interest groups are working together to reach a final consensus on the Master Plan. The Master Plan framework considers methods, that when implemented together, can collectively control dust, conserve water, maintain habitat value, and protect or enhance other resources on Owens Lake. The Master Plan does not propose projects for implementation on Owens Lake. The term of the Master Plan is 20 years, which is intended to provide a reasonable planning horizon for guide management decisions on Owens Lake.[29] The Master Plan is not a water-intensive project, but rather is a plan to promote water conservation and enhancement of resources on Owens Lake. When considered in conjunction with the proposed project, there would be no cumulatively considerable impact to hydrology.

e. Desert Renewable Energy Conservation Plan

The Desert Renewable Energy Conservation Plan is a State-mandated Natural Community Conservation Plan, which will help provide for effective protection and conservation of desert ecosystems while allowing for the appropriate development of renewable energy projects. The DRECP will provide long-term endangered species permit assurances to renewable energy developers and provide a process for conservation funding to implement the DRECP. It will also serve as the basis for one or more Habitat Conservation Plans under the Federal Endangered Species Act.[30] The required interim mitigation strategy provides for BMPs to address potential hydrology impacts from implementation of the DRECP and suggests improvements for water infiltration.[31] The DRECP is not a water intensive project, and when considered in conjunction with the proposed project, there would be no cumulatively considerable impact to hydrology, as each project would employ approved BMPs to minimize impacts to water quality.

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[28] *Los Angeles Department of Water and Power, Lower Owens River Project Draft EIR/EIS, Project Description, June 2004; https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-water/a-w-losangelesaqueduct/a-w-laa-lowerowensriverproject?_adf.ctrl-state=cwpi69vco_282&_afrLoop=222979506396574; accessed May 2012.*

[29] *Owens Lake Master Plan, Planning Committee Review Draft, December 2011; https://owenslakebed.pubspsvr.com/Master percent20Plan/Owens_Lake_Master_Plan_Planning_Committee_Review_Draft_December_2011.pdf; accessed May 2012.*

[30] *Desert Renewable Energy Conservation Plan; http://www.drecp.org/about/index.html; accessed May 2012.*

[31] *California Department of Fish and Game, Interim Mitigation Strategy as required by SB X8 34, September 2010; http://www.energy.ca.gov/2010publications/DRECP-1000-2010-006/DRECP-1000-2010-006-F.PDF; accessed May 2012.*

f. Dirty Socks Duck Club

This project is an application to develop the Dirty Socks Duck Club, a 292-acre parcel located on the shoreline of Owens Lake intended for the creation of waterfowl habitat and use as a private or public duck hunting club. According to the 2007 Environmental Assessment, Finding of No Significant Impact and Decision Record (FONSI), there would be no impact to water quality, including surface and ground water.[32] As such, when considered in conjunction with the proposed project, there would be no cumulatively considerable impact to hydrology.

g. Rio Tinto Trona Mine

The Rio Tinto mine, located on the southwest side of Owens Lake approximately 15 miles south of Lone Pine and northeast of Cartago, is owned and operated by US Borax and has been in operation since 1976, and trona ore has been mined on the 248-acre property since 1999. US Borax submitted an application to the County for a Conditional Use Permit and Amended Mining Reclamation Plan for the Trona Processing Upgrade Project, which would allow the processing of lower-grade trona ore found farther offshore than at present. The application seeks to increase production from 50,000 tons per year to 144,000 tons per year, while improving the purity of mined ore through the use of a portable washing plant on the lakebed and a permanent calciner (dryer) on the lakeshore. A Draft EIR for the proposed project was circulated in 2004.

h. Caltrans Highway 395 – Olancha/Cartago Four-Lane Project

The Caltrans Olancha/Cartago Four-Lane Project will convert approximately 12.6 miles of the two-lane highway into a four-lane highway. This project would have little or no impact on hydrology and water quality, according to the Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment, issued in August 2010.[33]

Based on the above, the proposed project's incremental impacts be less than cumulatively considerable when considered with related projects, and would not contribute to cumulatively significant impacts with respect to groundwater or surface water hydrology.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The proposed project would have less than significant impacts with respect to groundwater and surface water hydrology, and no mitigation measures are required. Recommendations provided in the 2012 *Hydrogeologic Evaluation* prepared for the proposed project are included in this section to minimize potential impacts on groundwater recharge, groundwater quality, and off-site wells, but are not required to reduce impacts to less than significant levels.

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[32] *Bureau of Land Management, Environmental Assessment, FONSI and Decision Record, EA No. CA-170-07-33, July 19, 2007; http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/bishop/eadocs/fy07.Par.89632.File.dat/ca170_07_33_final_fonsi.pdf; accessed May 2012.*

[33] *US Department of Transportation Federal Highway Administration and the California Department of Transportation, Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment for the Olancha/Cartago Four-Lane Project, August 2010; http://www.dot.ca.gov/dist9/projects/olancha/docs/draft_olancha-cartago_envir_doc.pdf; accessed May 2012.*

4.0 ENVIRONMENTAL IMPACT ANALYSIS
H. NOISE

INTRODUCTION

The section analyzes potential noise impacts that could result from project implementation. The analysis describes the existing noise environment within the project area, estimates future noise and vibration levels at surrounding land uses resulting from construction and operation of the proposed project, identifies the potential for significant impacts, and provides, where feasible, mitigation measures to address significant impacts. Noise calculation and data sheets for the project are included in **Appendix G** of this Draft EIR.

1. ENVIRONMENTAL SETTING

a. Noise and Vibration Basics

(1) Noise

Noise is usually defined as sound that is undesirable because it interferes with speech/communication and hearing, or is otherwise annoying (unwanted sound). The decibel (dB) is a conventional unit for measuring the amplitude of sound because it accounts for the large variations in sound pressure amplitude and reflects the way people perceive changes in sound amplitude.[1] The human hearing system is not equally sensitive to sound at all frequencies. Therefore, to approximate this human frequency-dependent response, the A-weighted system is used to adjust measured sound levels (dBA). The term "A-weighted" refers to a filtering of the noise signal in a manner corresponding to the way the human ear perceives sound.

People judge the relative magnitude of sound sensation by subjective terms such as "loudness" or "noisiness." A change in sound level of 3 dB is considered "just perceptible," a change in sound level of 5 dB is considered "clearly noticeable," and a change of 10 dB is recognized as "twice as loud."[2]

Community noise levels usually change continuously during the day. The equivalent sound level (L_{eq}) is normally used to describe community noise. The L_{eq} is the equivalent steady-state A-weighted sound level that would contain the same acoustical energy as the time-varying A-weighted sound level during the same time interval. For intermittent noise sources such as a vehicle alarm, the maximum noise level (L_{max}) is normally used to represent the maximum noise level measured during the measurement.

To assess noise levels over a given 24-hour time period, the Community Noise Equivalent Level (CNEL) descriptor is used. CNEL is the time average of all A-weighted sound levels for a 24-hour period with a 10 dBA adjustment (upward) added to the sound levels which occur in the night (10 p.m. to 7 a.m.) and a 5 dBA adjustment (upward) added to the sound levels which occur in the evening (7 p.m. to 10 p.m.). These penalties attempt to account for increased human sensitivity to noise during the quieter nighttime periods,

[1] *All sound levels, measured in decibel (dB), in this study are relative to $2x10^{-5}$ N/m^2.*

[2] *Engineering Noise Control, Bies & Hansen, 1988.*

particularly where sleep is the most probable activity. CNEL has been adopted by the State of California for development of the community noise element of general plans.[3]

b. Regulatory Framework

(1) County of Inyo Noise Element

Inyo County's General Plan Noise Element goals and policies that are applicable to the proposed project are as follows:

Goal NOI-1. Prevent incompatible land uses, by reason of excessive noise levels, from occurring in the future. This includes protecting sensitive land uses from exposure to excessive noise and to protect the economic base of the County by preventing the encroachment of incompatible land uses within areas affected by existing or planned noise producing uses.

Policy NOI-1.1. The County shall utilize the noise levels shown in **Table 4.H-1,** *Maximum Normally Acceptable Ambient Noise Levels By Land Use Type,* for evaluating project comparability related to noise.

Table 4.H-1

Maximum Normally Acceptable Ambient Noise Levels By Land Use Type

Land Use	Normally Acceptable Maximum L_{dn}
Residential – Low Density	60
Residential – Multi-Family	60
Transient Lodging	60
Schools, Libraries, Churches, Hospitals	60
Auditoriums	55
Playgrounds, Parks	70

Source: Inyo County General Plan, 9.7 Noise, 2001

Policy NOI-1.3. Require that new development not increase the ambient exterior noise level measured at the property line above established County noise standards (Table 4.H-1), unless mitigation measures are included to reduce impacts to below County noise standards.

Policy NOI-1.7. Contractors will be required to implement noise-reducing mitigation measures during construction when residential uses or other sensitive receptors are located within 500 feet.

b. Existing Conditions

The proposed project site is located within Cabin Bar Ranch, which is located south of the unincorporated community of Cartago. Cabin Bar Ranch is located 14 miles southwest of Keeler and 20 miles south of Lone

[3] *State of California, General Plan Guidelines, 2002.*

Pine. Cartago, Olancha and Lone Pine straddle US 395, and Keeler sits on the northeastern edge of the Owens Dry Lake along State Route 136. Cabin Bar Ranch is predominantly open space and rural in nature, as are its surrounding uses, except for low-density residential and commercial development in the town of Cartago immediately north of the project site and CGR's existing bottling plant operation located to the south of the property. The nearest sensitive receptors, residential land uses within Cartago, are located approximately 300 feet north of the project site.

2. ENVIRONMENTAL IMPACTS

a. Thresholds of Significance

The Inyo County General Plan Noise Element establishes County noise standards for ambient exterior noise levels. Appendix G of the State *CEQA Guidelines* contains the Environmental Checklist used to determine potential impacts in the Initial Study prepared for the proposed project (**Appendix A** of this Draft EIR). Based on the Environmental Checklist and Inyo County General Plan Noise Element, the proposed project would normally have a significant noise impact if it would:

NOISE 4.H-1: Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

NOISE 4.H-2: A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;

NOISE 4.H-3: A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;

The remaining Environmental Checklist questions pertaining to Noise address vibration and excessive noise levels in the vicinity of an airport or private airstrip. The Initial Study determined that the project would result in No Impact or a Less Than Significant Impact in response to these questions and no further analysis would be required in this Draft EIR. The Initial Study determinations are briefly summarized in **Section 6.0, Other Environmental Consideration** (subsection C, Effects Found Not to be Significant), in this Draft EIR.

b. Methodology

(1) Construction Noise

(a) Construction Noise

On-site construction noise impacts were evaluated by determining the noise levels generated by the different types of construction activity, calculating the construction-related noise level at nearby sensitive receptor locations, and comparing these construction-related noise levels to presumed noise level limits shown in Table 1.

(2) Operation Noise

(a) On-Site Noise Sources

Stationary point-source noise impacts were evaluated by identifying the noise levels generated by outdoor stationary noise sources such as mechanical equipment, etc., estimating the noise level from each noise source at surrounding residential property locations, and comparing such noise levels to the presumed ambient noise levels indicated in Table 4.H-1 to determine significance.

(b) Off-Site Roadway Noise

Roadway noise impacts were analyzed qualitatively.

c. Analysis of Project Impacts

(1) Construction Noise

NOISE-1: Would the proposed project expose persons to or generate noise levels in excess of standards established in the local General Plan?

NOISE-2: Would the proposed project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

The proposed project would be constructed in three phases, with the timing dependent upon market demand. For the construction of Phase I, the first activities would include site preparation, demolition, earthwork, grading and installation of utilities. This would be followed by Phase I building construction and then concrete and paving. Interior office improvements and installation of the first bottling line are anticipated to begin approximately six months after construction commences.

Construction would require an estimated 12,600 cubic yards of grading. The proposed project has been designed to balance all on-site cut and fill, and no material would be imported or exported from the site during construction. Construction staging and stockpiling would all occur on-site. The staging area for Phase I and II of project construction would be the proposed loading dock area east of and adjacent to the proposed Phase III warehouse. Construction staging for Phase III would be located in the same area during the construction of the proposed warehouse.

Project construction would require the use of mobile heavy equipment with high noise level characteristics. Individual pieces of construction equipment that would be used for project construction produce maximum noise levels of 75 dBA to 90 dBA at a reference distance of 50 feet from the noise source, as shown in **Table 4.H-2,** *Construction Equipment Noise Levels*. These maximum noise levels would occur when equipment is operating under full power conditions. However, equipment used on construction sites often operate under less than full power conditions, or part power, as shown in the second column in Table 4.H-2.

Construction noise levels were estimated based on an industry standard sound attenuation rate of 6 dB per doubling of distance for point sources (e.g., construction equipment). For purposes of the analysis, multiple pieces of construction equipment were assumed to operate simultaneously in the portion of the construction site nearest the off-site residential receptors. In addition, noise that would be generated during different

Table 4.H-2

Estimate of Construction Noise Levels (L_{eq}) at Off-Site Sensitive Receiver Locations

Receptor [a]	Construction Phases	Nearest Distance between Receptor and Construction Site, in feet	Estimated Construction Noise Levels [a] Hourly L_{eq} (dBA)	Project's Significance Threshold (dBA)	Exceeds Significance threshold?
R1	Grading	300	66	60	Yes
	Building Construction	300	65	60	Yes

[a] *Estimated construction noise levels represent a conservative condition when noise generators are at the project boundary, located closest to the receptors.*

Source: PCR Services Corporation, 2012.

construction phases that have the potential to overlap were added together to provide a composite construction noise level. These assumptions represent a worst-case noise scenario, since construction activities would more commonly be dispersed throughout the construction site, farther away from noise sensitive receptors. A summary of the construction noise impacts at the nearby sensitive receptors is provided in **Table 4.H-2**, *Estimate of Construction Noise Levels (L_{eq}) at Off-Site Sensitive Receiver Locations*. Detailed noise calculations for construction activities are provided in **Appendix G** of this Draft EIR.

As shown in Table 4.H-2, construction noise levels are estimated to reach a maximum of 66 dBA at the nearest off-site receptor location, which would exceed the 60 dBA significance threshold contained in the County's General Plan Noise Element. Therefore, construction-period noise impacts at the nearest residential uses (R1) north of the project site would be significant without incorporation of mitigation measures.

(2) Operational Noise

NOISE-3: Would the proposed project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

The existing noise environment in the project vicinity is dominated by traffic noise from nearby roadways, as well as nearby commercial and residential activities. Long-term operation of the project would have a minimal effect on the noise environment in proximity to the project site. Noise generated by the project would result primarily from parking activities, normal operation of the bottling facility mechanical equipment, and off-site traffic.

Off-Site Traffic Noise

According to the Traffic Impact Analysis, the site-generated trips would not create a significant impact at any nearby signalized intersection.[4] The traffic related noise levels on the off-site roadways, including from

[4] *Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Plant Traffic Impact Analysis, LSC Transportation Consultants, Inc.. July 2012.*

trucks, would not yield a significant change as project related traffic volumes would be dispersed to various roadways. As such, traffic noise impacts would be less than significant and no mitigation measures are necessary.

On-Site Operational Noise

The operation of mechanical equipment such as air conditioning equipment may generate audible noise levels. The bottling facility would also include exterior cooling equipment to ensure successful operation of the plant's interior machinery (i.e., the bottling lines). This cooling equipment is anticipated to include two cooling towers and two Trane® chillers. One cooling tower and one Trane® chiller would be installed when the first bottling line is installed, and the second cooling tower and Trane® chiller would be installed when the third bottling line is added. The exterior equipment would be placed adjacent to the south wall of the bottling facility, along the eastern part of the south wall. The nearest residential uses are located approximately 1,000 feet from chillers and cooling towers.

Based on measured noise levels, chillers and cooling towers would generate noise levels of approximately 80 dBA (L_{eq}) and 70 dBA (L_{eq}) at 5 feet distance, respectively.[5] Combined noise levels of two chillers and two cooling towers would be 83 dBA (L_{eq}) at 5 feet. Based on a noise level source strength of 83 dBA at a reference distance of 5 feet and accounting for distance attenuation (minimum 46 dBA loss), chillers and cooling towers noise would be 37 dBA and would not increase the ambient noise environments at the nearest residential uses north of the project site. Since project-related operational noise would be well below the County Noise Element's significance threshold of 60 dBA at those residential uses, impacts on surrounding uses would be less than significant. No mitigation measures are required.

3. MITIGATION MEASURES

The following mitigation measures address the potentially significant construction impacts on the nearest residential uses from the proposed project.

a. Construction

Mitigation Measure NOISE-1: Noise-generating equipment operated at the project site shall be equipped with the most effective noise control devises, i.e., mufflers, lagging, and/or motor enclosures. All equipment shall be properly maintained to assure that no additional noise, due to worn or improperly maintained parts, would be generated.

Mitigation Measure NOISE-2: A 15-foot-tall temporary noise barrier shall be provided along north boundary of the project site to block line-of-sight to the residential uses north of the project site.

b. Operation

Noise impacts from proposed project operations would be less than significant, and no mitigation measures are necessary.

[5] *Noise measurements conducted at a mechanical equipment facility, PCR, March 1999.*

4. CUMULATIVE IMPACTS

As discussed in Section 3. Environmental Setting of this Draft EIR, there are 8 related projects identified in the vicinity of the proposed project. The one closet related project situated approximately 1,200 feet from the project site, including Related Project No. 8 – Caltrans Highway 395, Olancha/Cartago Four-Lane Project. All other related projects are minimum 3,000 feet away from the proposed project. The potential for noise impacts to occur are specific to the location of each related project as well as the cumulative traffic on the surrounding roadway network.

a. Construction-Period Noise

Noise from construction of the proposed project and related projects would be localized, thereby potentially affecting areas immediately within 500 feet from the construction site. Due to distance attenuation (more than 1,200 feet away), construction noise from one site would not result in a noticeable increase in noise at sensitive receptors near the other site, which would preclude a cumulative noise impact. As such, cumulative impacts associated with construction noise would be less than significant.

Due to the rapid attenuation characteristics of ground-borne vibration and distance of the related projects to the proposed project, there is no potential for a cumulative construction-period impact with respect to ground-borne vibration.

b. Operational-Period Noise

As previously discussed in Subsection c.(2), the traffic related noise levels on the off-site roadways, including from trucks, would not yield a significant change as project related traffic volumes would be dispersed to various roadways. As such, traffic noise impacts would be less than significant and no mitigation measures are necessary.

The project site and surrounding area have been developed with uses that have previously generated, and will continue to generate, noise from lawn maintenance activities, mechanical equipment (e.g., air conditioning systems), and vehicle movements, among other community noise sources. As demonstrated above in Subsection c.(2). (Long-term Operations Noise), noise impacts related to project development would be less than significant. In addition, the related projects are of sufficient distance approximately 1,200 feet from the proposed project such that operational noise levels from these projects would not be audible noise at the project site. As such, cumulative noise impacts related to long-term project operations would be less than significant.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Mitigation Measure 4.H-1 would reduce the noise impacts associated with construction equipment at the nearby residential uses. Mitigation Measure 4.H-2 would reduce construction noise levels at the residential uses north of the project site by up to 10 dBA and reduce significant noise impacts to a less than significant level. Therefore, construction noise impacts would be less than significant at the nearest residential uses after mitigation.

4.0 ENVIRONMENTAL IMPACT ANALYSIS
I. TRANSPORTATION

INTRODUCTION

This section analyzes the proposed project's potential impacts on the following facilities: one future intersection along US 395 (the proposed site access roadway's connection with US 395), traffic travel along US 395, and the potential safety impacts of the project's proposed connection to US 395. Information for this analysis is based on a Traffic Impact Analysis (TIA), prepared by LSC Transportation Consultants, Inc.[1] The Inyo County Planning Department reviewed and approved the TIA prior to circulation of this Draft EIR. The TIA is included as **Appendix H** of this Draft EIR.

1. ENVIRONMENTAL SETTING

a. Regulatory Framework

(1) Inyo County General Plan

The Inyo County General Plan Circulation Element recognizes that US 395, on which the project would be located, is the major transportation corridor in and through Inyo County. The Circulation Element goes on to state that US 395 is by far the most traveled route in the County and is part of a major transportation corridor connecting the Eastern Sierra Region and Western Central Nevada to the Southern California Region. The US 395 corridor (along with State Route [SR] 14) is identified as the lifeline of all the major communities along the Eastern Sierra. Reflecting the roadway's importance to Inyo County, the Element further identifies the expansion of US 395 to four lanes throughout the County as a primary issue.

The Circulation Element establishes performance goals to ensure that the transportation infrastructure efficiently and safely meets the needs of Inyo County. With respect to roadways, the Circulation sets forth one goal supported by three policies. Specifically, Goal RH-1 seeks to provide "a transportation system that is safe, efficient, and comfortable, which meets the needs of people and goods and enhances the lifestyle of the County's residents." The specific policies to support this goal include Policy RH-1.3, which seeks to facilitate safer truck transportation and ease the impact of trucks on residential areas. Additionally, Policy RH-1.4 seeks to maintain a minimum level of service (LOS) "C" on all roadways in the County, except where roadways expansions or reconfigurations necessary for this goal will adversely impact the small community character and economic viability of designated Central Business Districts. Lastly, Policy RH-1.5 seeks to provide proper access to residential, commercial, and industrial areas.

b. Existing Conditions

The project site is located in a rural portion of Inyo County, just south of the unincorporated community of Cartago, and approximately 0.75 miles north of the existing Crystal Geyser Roxane (CGR) spring water bottling plant in Olancha. The project site is located immediately adjacent to the east side of, and is accessed

[1] *Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Plant Traffic Impact Analysis, prepared by LSC Transportation Consultants, Inc., December 2011.*

by, US 395. A description of the existing roadway configuration and traffic volumes along US 395 in the project vicinity are found in the paragraphs below.

(1) Existing Roadways

(a) US 395

The project site is directly accessed from US 395. The US 395 corridor is a key element of the surface transportation network for California. As mentioned above, US 395 serves as the key transportation corridor connecting the eastern Sierra region, Mono and Inyo Counties, and western central Nevada to Southern California. It also serves as the "Main Street" for the communities it passes through. In the vicinity of the project site, US 395 is an interstate highway running north-south between the east side of the Sierra Nevada Mountains and the west side of the Owens Dry Lake. The section of US 395 adjacent to the project site, and running through Cartago, consists of one lane in each direction with no median. US 395 has a posted speed limit of 55 miles per hour (mph) in this section. Much of US 395 through Inyo County consists of two lanes in each direction, separated by an earthen median. The segment of US 395 within the vicinity of the project site is recognized as a Class III bike route. This Class III bike route serves to connect the communities along US 395, from Bishop to Olancha, although several small gaps in the route still exist.[2] Given that the project's proposed new site access roadway from US 395 does not yet exist, there are no LOS deficiencies under Existing (2011) No Project conditions.

(b) Cabin Bar Ranch Road

Cabin Bar Ranch Road is a private paved access road into Cabin Bar Ranch that extends approximately 2,000 feet from US 395 to a cul-de-sac at the center of a formerly proposed, but unrealized, on-site subdivision. Utilities, including wastewater, water supply, and telephone lines, were installed beneath Cabin Bar Ranch Road at the time of its construction, but the wastewater and water supply lines were never activated and are not currently in use. The pavement along the existing road would be demolished and removed during the construction of the proposed project. Upon removing the asphalt, the unimproved alignment of Cabin Bar Ranch Road and the gate accessing the road would be retained to allow utility companies access to their utilities. The roadway would remain unused for all other purposes.

(2) Existing Traffic Volumes

Existing (2011) traffic volumes on US 395 were based on California Department of Transportation (Caltrans) traffic count data for the year 2010 (the most recent year for which data is available). Hourly volume data was obtained from Caltrans' count station, located on US 395 immediately north of its junction with SR 190 (north of Olancha), or about 2.5 miles south of the proposed site access point. The data from this count station indicates that the peak periods of traffic associated with existing traffic conditions occurs on weekdays in the summer season. Based on a review of continuous peak hour traffic volumes from June 2010 through August 2010, it was determined that the busiest non-holiday weekday traffic occurred on Friday July 30th, 2010, from 1:00 P.M. to 2:00 P.M.

In order to project the 2010 volumes to the Existing (2011) year, five years of average annual daily traffic (AADT) volumes between 2005 and 2010 were obtained from Caltrans at a point along US 395 immediately

[2] *Inyo County Planning Department. General Plan Circulation Element, Diagrams D through F. January 11, 2002.*

north of its junction with SR 190. This data showed a five percent decrease in volumes over the five-year period, or a one percent annual average decrease. Although this data period showed a reduction in overall traffic volume, to be conservative, this analysis assumes that no further reduction in traffic volume would occur past the 2010 year. The Existing (2011) traffic volumes without the project for the P.M. peak hour (which is considered to occur from 1:00 P.M. to 2:00 P.M.) on US 395 at the location of the proposed intersection was calculated to be 230 vehicles northbound and 107 vehicles southbound.

As discussed in detail below, the proposed project would generate its highest volume of trips during the 7:00 A.M. to 8:00 A.M. hour (which is considered to be the A.M. peak hour). Existing traffic volumes from this time period under Existing (2011) conditions without the project were obtained from the Caltrans, with 386 northbound vehicles and 349 southbound vehicles.

2. ENVIRONMENTAL IMPACTS

a. Thresholds of Significance

(1) Appendix G to the State CEQA Guidelines

Appendix G of the *CEQA Guidelines* contains the Initial Study Environmental Checklist form used during preparation of the project Initial Study (contained in **Appendix A** of this EIR). The Initial Study Environmental Checklist questions relating to transportation have been utilized as the thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it would:

a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

b. Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads and highways.

c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

e. Result in adequate emergency access.

f. Result in inadequate parking capacity

g. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

The Initial Study determined that the proposed project would have a less than significant impact with respect to Guideline Questions XVI.b), c), e), and f) above, and therefore, no further discussion of these topics is required in this Draft EIR.

(2) Inyo County General Plan

As discussed above, the Inyo County General Plan Circulation Element sets forth thresholds for roadways and intersections within the County. As set forth therein, for highways within the County, an LOS C shall be maintained except where roadway expansions or reconfigurations necessary for this goal will adversely impact the small community character and economic viability of designated Central Business Districts. Therefore, a project would have a significant impact if it would:

a. Cause an intersection or roadway segment within Inyo County to operate at a level of service of LOS C or lower (Policy RH-1.4).

b. Provide unsafe access to and/or from the proposed project site or facilitate unsafe truck transportation along US 395 (Policy RH-1.3 and RH-1.5).

(3) Project Impact Thresholds

Based on the above criteria established by Appendix G to the *State CEQA Guidelines* and the Inyo County General Plan Circulation Element, and those issues scoped out in the project's Initial Study (**Appendix A** to this Draft EIR), the following significance thresholds are used to evaluate potential Transportation/Traffic impacts of the project:

TRAN-1: Would the proposed project cause an intersection or roadway segment within Inyo County to operate LOS C or lower?

TRAN-2: Would the proposed project substantially increase hazards due to traffic volumes, a design feature (e.g., sharp curves or dangerous intersections), incompatible uses, or vehicles entering US 395.

b. Methodology

(1) Existing Conditions

As mentioned above, Existing (2011) traffic volumes on US 395 were based on Caltrans traffic count data for the year 2010 (the most recent year for which data is available). Hourly volume data was obtained from Caltrans' count station located on US 395 at the junction of SR 190 immediately north of Olancha, or about 2.5 miles south of the proposed site access point. The data from this count station indicates that the peak periods of traffic associated with existing traffic conditions occurs on weekdays in the summer season. Based on a review of continuous peak hour traffic volumes from June 2010 through August 2010, it was determined that the busiest non-holiday weekday traffic occurred on Friday July 30th, 2010, from 1:00 P.M. to 2:00 P.M. Caltrans weekly traffic volumes on US 395 near the proposed project over the course of one calendar year, which indicate that the highest traffic volumes occur during the summer season, can be found in the TIA (**Appendix H** of this Draft EIR).

To determine Existing (2011) conditions, 2010 Caltrans data (the most recent year data is available) were projected to the 2011 year using the growth occurring from the 2005–2010 data period. Although this data period showed a five percent reduction in overall traffic volume (accounting for a one percent decrease each year), to be conservative, this analysis assumed that no further reduction in traffic volume has occurred past the 2010 traffic volumes.

(2) Proposed Conditions

The TIA's analysis of proposed conditions included an evaluation of one intersection, the proposed new site access roadway's intersection with US 395, as it was determined through a preliminary analysis that this is the only intersection potentially affected by the project. Additional roadways in Cartago were not analyzed, given that the only one percent of the truck traffic generated by the proposed project would travel north of the site, and the increase in P.M. peak-hour traffic volumes to the north is expected to be minimal. As mentioned above, typical busy summer conditions were evaluated, given that the peak periods of traffic activity associated with the proposed bottling plant as well as the highest levels of background traffic on US 395, occur during the summer months.

The TIA analyzed the following transportation scenarios:

- Existing (2011) No Project
- Existing (2011) With Project
- Future (2031) No Project
- Future (2031) With Project
- Future (2031) With Project and With Caltrans 4-lane Project

In addition, the TIA addressed the following traffic-related issues:

- Project impact on US 395 traffic volumes
- Intersection LOS impacts at the intersection of the site access roadway and US 395
- The need for turn lanes at the site access intersection
- Driver sight distance at the site access intersection

(a) Trip Generation

The first step in determining the project's impacts was to calculate the number of trips that the project would generate. Standard trip generation rates are not provided for bottling plants in standard sources, such as those prepared by the Institute for Transportation Engineers (ITE). Therefore, to calculate the number of daily trips that would be generated by the proposed project, a detailed trip generation estimate was developed based upon an analysis of truck trip patterns and "person-trip" patterns at the existing Crystal Geyser Plant in Olancha, which is located approximately 0.75 miles south of the project site. Based on the information from the existing facility, the proposed project would include 4 types of trips: trucks, service vehicles, employees, and visitors. The methodology for determining the number of each of these trips, as well as their assumed distribution along US 395, is discussed immediately below.

The number of truck and service vehicle trips generated by the proposed project was based on detailed information provided by the distribution manager at the existing bottling facility in Olancha and then applied to the size of the proposed project in relationship to that facility. Similarly, the distribution pattern was based on that of the existing Crystal Geyser plant approximately 0.75 mile south of the project site. It was determined that approximately 99 percent of truck trips would be made to/from the south, while 60 percent of service vehicles and visitors would be made to/from the south, as the nearest sizable residential area and commercial markets are located to the south. The results of these projections are found in the below discussion of the project's trip generation.

With respect to employee trips, employment figures from **Section II, Project Description**, of this Draft EIR, were applied to trip distribution assumptions. The bottling plant would employ a maximum of 50 people over 3 shifts. On a typical busy day, a maximum of 17 employees would be on-site at one time. Employees would commute to the plant via the proposed employee shuttle or by personal vehicle. The following assumptions were made in order to estimate the number of trips generated by employees:

- 60 percent of employees are assumed to live south of the plant and 40 percent are assumed to live north of the plant (10 southern employees and 7 northern employees per shift), as the nearest sizable residential area and commercial markets are located to the south.
- 50 percent of employees commuting to/from the south along US 395 would use the shuttle (this equates to 5 employees riding the shuttle and 5 employees using personal vehicles per shift).
- An average vehicle occupancy rate of 1.1 employees per vehicle is assumed for employees traveling to/from the site via personal automobile, based on data provided in the 2005-2009 American Community Survey (US Census) for the Olancha/Cartago area.
- Each vehicle is assumed to make one trip to and one trip from the site. In addition, one employee per shift is assumed to make a round trip off-site for lunch, errands, etc. in the middle of the shift.

The project's trip generation was assigned through the study intersection based this distribution pattern, and the resulting AM and PM peak-hour turning movement volumes are discussed below.

(b) Performance Standards

Both Inyo County and the proposed project's TIA assess traffic impacts in terms of LOS and vehicle delay. LOS is a concept that was developed by transportation engineers to quantify the level of operation of intersections and roadways (Highway Capacity Manual [HCM]), Transportation Research Board, 2010). LOS measures are classified in grades "A" through "F," indicating the range of operation. LOS "A" signifies the best level of operation, while "F" represents the worst. A detailed LOS description is provided in **Table 4.I-1,** *Level of Service (LOS) Definitions*. The HCM 2010 LOS methodologies were applied to all intersections analyzed in the TIA (i.e., the intersection of US 395 and the proposed site access roadway).

(c) Existing (2011) Plus Project Scenario

This scenario includes traffic changes caused by the project under existing baseline conditions, assuming the project would be completed by the end of year 2011. To determine the project's impact under this scenario, the project's trips, as calculated through the above methodology, were assigned to the study intersection based on the known distribution pattern. Adding the project-generated volumes to the Existing (2011)

Table 4.I-1

Level of Service (LOS) Definitions

Level of Service (LOS)	Definition
A	Represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream. Freedom to select desired speeds and to maneuver within the traffic stream is extremely high. The general level of comfort and convenience provided to the motorist, passenger, or pedestrian is excellent.
B	Represents a range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver within the traffic stream from LOS A. The level of comfort and convenience provided is somewhat less than at LOS A, because the presence of others in the traffic stream begins to affect individual behavior.
C	Represents a range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream. The selection of speed is now affected by the presence of others, and maneuvering within the traffic stream requires substantial vigilance on the part of the user. The general level of comfort and convenience declines noticeably at this level.
D	Represents high-density, but stable, flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally poor level of comfort and convenience. Small increases in traffic flow will generally cause operational problems at this level.
E	Represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Freedom to maneuver within the traffic stream is extremely difficult, and it is generally accomplished by forcing a vehicle or pedestrian to "give way" to accommodate such maneuvers. Comfort and convenience levels are extremely poor, and driver or pedestrian frustration is generally high. Operations at this level are usually unstable, because small increases in flow or minor perturbations within the traffic stream will cause breakdowns.
F	Represents define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations. Operations within the queue are characterized by stop and-go waves, and they are extremely unstable. Vehicles may progress at reasonable speeds for several hundred feet or more, then be required to stop in a cyclic fashion. Level of service F is used to describe the operating conditions within the queue, as well as the point of the breakdown. It should be noted, however, that in many cases operating conditions of vehicles or pedestrians discharged from the queue may be quite good. Nevertheless, it is the point at which arrival flow exceeds discharge flow which causes the queue to form, and level of service F is an appropriate designation for such points.

Source: Transportation Research Circular No. 212, Interim Materials on Highway Capacity, Transportation Research Board, 1980.

Without Project volumes yields the 2011 With Project volumes. The resulting A.M. and P.M. peak-hour turning movement volumes were then analyzed using the HCM LOS methodology discussed above to determine the intersection's LOS.

(d) Future (2031) No Project and Future (2031) With Project Scenarios

The potential traffic impacts of the proposed project under Future (2031) No Project conditions were evaluated. First, Year 2031 traffic volumes were estimated without the project. Next, 2031 volumes with the project were estimated and LOS was analyzed. When considering the Future (2031) With Project traffic volumes, the project was analyzed under two scenarios; one scenario without the project's proposed traffic design features and one with the project's proposed traffic design features. Finally, the Future (2031) With Project traffic conditions with the proposed Caltrans Olancha-Cartago 4-Lane Project ("Caltrans Project") were analyzed. No other projects are known to be proposed within the study area that would produce a measurable increase in traffic along US 395 within the vicinity of Cartago or the project site. Any growth that would contribute traffic to US 395 in the project vicinity is assumed to be captured in the ambient growth volumes, as determined by Caltrans and discussed in the paragraph below. Although project buildout is anticipated to be in 2025–2027, the Future Year for the purposes of the traffic analysis is assumed to be 2031 to account for any unforeseen delays in construction and to provide a conservative traffic analysis. Additionally, for the purposes of this traffic analysis, only full buildout of the site is evaluated, and impacts are not assessed separately for each phase. This presents a worst-case scenario as the project's traffic impacts would be less than stated until the project is fully built out.

Future (2031) No Project traffic volumes were estimated by applying an average annual growth rate to the Existing (2011) No Project volumes. The Olancha/Cartago Four Lane Project Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment (Federal Highway Administration and Caltrans, August 2010) estimated the average annual growth rate in traffic volumes along US 395 will be 1.3 percent for the next 20 years. This growth rate was applied to the Existing (2011) No Project traffic volumes in order to estimate the Future (2031) No Project volumes.

(e) Turn-Lane Analysis

A left-turn lane warrant analysis was performed for the project access point using the Guidelines for Reconstruction of Intersections (Caltrans 1985). As the Caltrans Guidelines do not provide a numerical right-turn lane warrant, the need for a right-turn lane along US 395 at the site access point was evaluated using the National Cooperative Highway Research Program's (NCHRP) Report 457 "Evaluating Intersection Improvements: An Engineering Study Guide" (Transportation Research Board, 2001).

c. Project Features

The proposed project encompasses a new spring water bottling facility on the Cabin Bar Ranch Property. Construction would be divided into three phases, with the first phase including a 106,500-square-foot building housing two bottling lines and a new access road. Phase II would consist of a 92,000-square-foot addition which would include the additional two bottling lines, and Phase III would add a 40,000-square-foot storage warehouse. As mentioned above, for the purposes of this traffic analysis, only full buildout of the site is evaluated, and impacts are not assessed separately for each phase. This presents a worst-case scenario as the project's traffic impacts would be less than stated until the project is fully built out. The new facility would operate on weekdays only. The project includes provision of an employee shuttle, which would run to/from the south three times a day.

Development of the proposed bottling facility would require a new 24-foot-wide site access roadway leading into the site from US 395. This new permanent site access roadway would be located approximately

2,500 feet south of the existing Cabin Bar Ranch Road. The internal access road would be approximately 3,100 feet in length and would cross the site in a northeastern alignment from US 395 towards the proposed bottling facility.

Caltrans, in coordination with the Inyo County Transportation Commission, is proposing to widen approximately 12.7 miles of US 395 within the vicinity of Olancha and Cartago. On June 29, 2011, Caltrans announced a preferred alignment for this widening project. The preferred alignment would result in a four-lane, controlled-access, divided expressway that would begin south of Olancha and meet up with the previously constructed Ash Creek Four Lane Project. As of October 2011, Caltrans was considering two options in the Cartago area: one would convert the existing US 395 to a frontage road and the other would use the existing US 395 lanes as the northbound lanes. Construction of the Caltrans project is anticipated to begin in 2016.

As the project's proposed new site access roadway would be constructed approximately four years prior to the planned improvements to US 395, the project would construct improvements along US 395 per Caltrans standards based on the current configuration of US 395. Improvements to US 395 would include the appropriate acceleration and deceleration lanes, as well as turning lanes, on both the northbound and southbound side of US 395. At the point in time that the Caltrans project is completed, the proposed access road's tie in with US 395/US 395 Frontage Road would be modified accordingly, although these modifications are not considered a part of this proposed project. The pavement on the existing Cabin Bar Ranch Road would be demolished and removed in Phase I of the proposed project. The unimproved alignment and gate along Cabin Bar Ranch Road would be retained to allow utility companies access to their utilities. The roadway would remain unused for all other purposes.

d. Analysis of Project Impacts

(1) Project Generation, Distribution, and Assignment

(a) Truck Trips

Based on the methodology discussed above, at project buildout, a total of 80 trucks per day would arrive and depart the new bottling plant, based on information provided by the distribution manager of the existing Olancha Crystal Geyser facility. Specifically, an estimated 40 trucks would be associated with Phase I, 20 additional trucks with Phase II, and 20 additional trucks with Phase III. At full buildout, these trucks would each generate 2 one-way trips for a total of 160 one-way trips per day (80 entering, and 80 exiting). Twenty-five (25) percent of the trips, or 40 one-way trips, are projected to occur during three, two-hour peak periods during the day (i.e., 7:00 A.M. to 9:00 A.M., 12:00 P.M. to 2:00 P.M., and 6:00 P.M. to 8:00 P.M.), with the remaining trips spread out through the day. To estimate conditions during the busiest hour (7:00 A.M. to 8:00 A.M.), it was estimated that 60 percent of the trucks would enter and exit in the first hour of each two-hour peak period, for a total of 12 trucks and 24 one-way trips during the first two peak times of the day. Conversely, during the evening peak hours from 6:00 P.M. to 8:00 P.M., it was estimated that 60 percent of the trucks would enter and exit in the second hour of the two-hour period, as shown in **Table 4.I-2,** *Hourly Trip Generation*.

Table 4.I-2

Hourly Trip Generation

Hour Start Time	Trucks		Service Vehicles		Employee Vehicles[a]		Visitor Vehicles		Total Vehicle Trips		
	In	Out	In	Out	In	Out	In	Out	In	Out	Total
12:00 A.M.	1	1	-	-	-	-	-	-	**1**	**1**	**2**
1:00 A.M.	1	1	-	-	-	-	-	-	**1**	**1**	**2**
2:00 A.M.	1	1	-	-	-	1	-	-	**1**	**2**	**3**
3:00 A.M.	1	1	-	-	1	-	-	-	**2**	**1**	**3**
4:00 A.M.	1	1	-	-	-	-	-	-	**1**	**1**	**2**
5:00 A.M.	1	1	-	-	-	-	-	-	**1**	**1**	**2**
6:00 A.M.	1	1	-	-	12	-	-	-	**13**	**1**	**14**
7:00 A.M.	12	12	1	1	-	12	-	-	**13**	**25**	**38**
8:00 A.M.	8	8	-	-	-	-	-	-	**8**	**8**	**16**
9:00 A.M.	1	1	1	1	-	-	-	-	**2**	**2**	**4**
10:00 A.M.	2	2	-	-	-	-	-	-	**2**	**2**	**4**
11:00 A.M.	1	1	1	1	-	1	-	-	**2**	**3**	**5**
12:00 P.M.	12	12	-	-	1	-	2	-	**15**	**12**	**27**
1:00 P.M.	8	8	1	1	-	-	-	2	**9**	**11**	**20**
2:00 P.M.	1	1	1	1	12	-	-	-	**14**	**2**	**16**
3:00 P.M.	2	2	-	-	-	12	-	-	**2**	**14**	**16**
4:00 P.M.	1	1	1	1	-	-	-	-	**2**	**2**	**4**
5:00 P.M.	1	1	-	-	-	-	-	-	**1**	**1**	**2**
6:00 P.M.	8	8	1	1	-	-	-	-	**9**	**9**	**18**
7:00 P.M.	12	12	-	-	-	1	-	-	**12**	**13**	**25**
8:00 P.M.	1	1	-	-	1	-	-	-	**2**	**1**	**3**
9:00 P.M.	1	1	-	-	-	-	-	-	**1**	**1**	**2**
10:00 P.M.	1	1	-	-	12	-	-	-	**13**	**1**	**14**
11:00 P.M.	1	1	-	-	-	12	-	-	**1**	**13**	**14**
Total	**80**	**80**	**7**	**7**	**39**	**39**	**2**	**2**	**128**	**128**	**256**

Proposed Project Peak hour is shaded.

[a] *Includes shuttle vehicle trips*

Source: LSC Transportation Consultants, Inc., and Crystal Geyser Roxane, 2011.

(b) Service Vehicles

Based on the methodology discussed above, at most, approximately 4 propane trucks, 1 solid waste disposal truck, 1 service contractor truck, and 1 delivery truck are expected to visit the site over the course of a typical busy day. These vehicles would generate a total of 14 one-way trips (7 arriving and 7 departing). As shown in Table 4.I-2, these trips are assumed to be distributed evenly throughout the day between 7:00 A.M. and 6:00 P.M.

(c) Employees

During the peak summer months, the bottling plant would employ a maximum of 50 people over 3 shifts. On a typical busy day a maximum of 17 employees would be onsite at one time. Employees will commute to the plant via the proposed employee shuttle or by personal vehicle. Based on the methodology discussed above, a total of 26 one-way vehicle-trips (13 entering and 13 exiting) are estimated to be made by employees per shift; this includes both employee personal vehicles and shuttle trips. Daily, counting all three shifts, a total of 78 trips (39 entering and 39 exiting) are expected to be made by employees. The shift changes are expected to occur at 7:00 A.M., 3:00 P.M. and 11:00 P.M. Assuming employees arrive in the hour before their shift starts and depart in the hour after their shift ends, the resulting trips by hour are shown in Table 4.I-2.

(d) Visitors

Two visitors are expected to visit the site on a typical busy day, generating four one-way trips (two entering and two exiting). To be conservative, these trips are assumed to occur mid-day, which corresponds to the period of highest traffic volumes on the highway.

(e) Total Trip Generation

In summary, the total number of trips generated by the site is estimated to be approximately 256 one-way trips (128 inbound and 128 outbound) on a peak weekday, as shown in Table 4.I-2. The peak hour of site-generated traffic activity would occur between 7:00 A.M. and 8:00 A.M., with a total of 38 one-way trips (13 entering and 25 exiting).

(2) Project Impacts

TRAN-1 The proposed project would not result in a significant impact because no intersection or roadway within Inyo County would operate at LOS C or lower as a result of the proposed project.

(a) Existing (2011) With Project Traffic Projections.

This scenario includes traffic changes caused by the project under existing baseline conditions, assuming the project would be completed by the end of year 2011. The project's estimated traffic, as discussed above, was added to the Existing (2011) No Project traffic volumes to estimate Existing (2011) With Project traffic volumes.

With respect to two-way volumes on US 395, to the south of the project site, the proposed project would increase volumes on US 395 over Existing (2011) No Project conditions by nine (9) percent during the A.M. peak hour (7:00 A.M. to 8:00 A.M.) and by three (3) percent during the P.M. peak hour (1:00 P.M. to 2:00 P.M.). As discussed above, the majority of project traffic would travel to and from south of the project site. Thus, to

the north of the site access roadway, implementation of the proposed project would result in an increase in two-way traffic volumes of up to two (2) percent over the Existing (2011) No Project conditions during the A.M. peak hour. Any increase during the P.M. peak hour would be negligible, considering that no truck trips are expected to be made to/from the north during the P.M. peak hour. Thus, the TIA concluded that the proposed development under the Existing (2011) Plus Project would not cause intersections or roadways within Inyo County to operate at LOS C or lower, and a less than significant impact would result.

(b) Future (2031) No Project Projections

The TIA found that ambient traffic growth on US 395 would not result in significant traffic impacts along US 395 within the project vicinity under the Future (2031) No Project conditions. Given that the proposed site access intersection along US 395 would not exist without the proposed project and no additional truck/vehicle trips would be generated at the project site, there are no LOS deficiencies under Future (2031) No Project conditions. The LOS calculations for Future (2031) No Project conditions are summarized in **Table 4.I-3,** *Intersection Level of Service (LOS) at Access Point*. This is considered a less than significant impact.

Table 4.I-3

Intersection Level of Service (LOS) at Access Point

	With Project			
	Worst Movement[a]		Total Intersection	
Scenario	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Existing (2011)				
AM Peak Hour	12.1	B	0.9	A
PM Peak Hour	18.9	C	0.3	A
Future (2031) Conditions				
AM Peak Hour	13.4	B	0.8	A
PM Peak Hour	**25.5**	**D**	0.3	A
PM Peak Hour *With Southbound Acceleration Lane*	17.4	C	0.2	A
Future (2031) With Caltrans Project Assuming Frontage Road				
AM Peak Hour	8.6	A	4.2	A
PM Peak Hour	8.7	A	1.4	A
Future (2031) With Caltrans Project Assuming Divided Highway				
AM Peak Hour (Eastern Intersection)	13.0	B	1.0	A
AM Peak Hour (Western Intersection)	9.9	A	1.4	A
AM Peak Hour (Eastern Intersection)	15.3	C	0.4	A
PM Peak Hour (Western Intersection)	11.2	B	0.3	A

Bold text indicates that the County LOS standard would be exceeded.

[a] *In all scenarios, the worst movement at this intersection is on the westbound approach (vehicles departing the private access roadway of the proposed Crystal Geyser Cabin Bar Ranch Spring Water Bottling Plant).*

Source: LSC Transportation Consultants, 2011.

(c) Future (2031) With Project Projections

As mentioned above, the Future (2031) With Project analysis evaluates two scenarios; one scenario without the project's proposed traffic design features and one with the project's proposed traffic design features. Without implementation of the proposed traffic design features (i.e., acceleration/deceleration lanes, turn lanes), the worst movement at the intersection of US 395 and the proposed access road is expected to operate at a LOS D during the P.M. peak hour (1:00 P.M. to 2:00 P.M.), with an average delay of approximately 25.5 seconds per vehicle, under the Future (2031) With Project scenario. This LOS does not meet the County's performance standards for intersection operations. The LOS for all vehicles on US 395 would remain acceptable during the P.M. peak hour, and no queuing is expected to occur on US 395. Only vehicles exiting the proposed private access road would experience LOS D.

Nonetheless, as discussed in Section II, Project Description, of this Draft EIR, and above, the proposed project would provide acceleration and deceleration lanes, as well as turning lanes, on both the northbound and southbound side of US 395. With respect to traffic operations, the proposed left-turn acceleration lane for vehicles exiting the plant and traveling southbound along US 395 would improve the intersection's performance to an acceptable LOS C during the P.M. peak period under Future (2031) With Project conditions. The A.M. peak hour would remain at an acceptable LOS B with or without the project's proposed traffic design features. The results of the Future (2031) With Project conditions are summarized in Table 4.I-3. As the project's proposed access roadway would operate at LOS C or better under Future (2031) With Project conditions, with inclusion of the project's traffic design features, the proposed project would result in a less than significant impact.

With respect to two-way volumes on US 395, to the south of the project site, the proposed project would increase volumes on US 395 over Future (2031) No Project conditions by seven (7) percent during the A.M. peak hour and by two (2) percent during the P.M. peak hour. As discussed above, the majority of project traffic would travel to and from the south of the project site. Thus, to the north of the proposed site access roadway, implementation of the proposed project would result in an increase in two-way traffic volumes of up to two (2) percent over the Future (2031) No Project conditions during the A.M. peak hour. Any increase during the P.M. peak hour would be negligible, considering that no truck trips are expected to be made to/from the north during the P.M. peak hour. As a result, the proposed project would not result in any intersection or roadway within Inyo County operating at LOS C or lower, and thus a less than significant impact would result.

(d) Future (2031) With Project With Caltrans Project Projections

The Caltrans Olancha/Cartago Four Lane Project proposes to construct a controlled access divided expressway in the area of the project site, with construction tentatively scheduled to start in 2016. At this time, it is anticipated that the four-lane highway would begin south of Olancha and pass west of Olancha and the Los Angeles Aqueduct. Once the alignment crosses Olancha Creek, the preferred alternative would then cross the Los Angeles Aqueduct and continue north through Cartago along the existing highway, to meet up with the previously constructed Ash Creek Four Lane Project.

As of October 2011, Caltrans was considering two options in the Cartago area: one would convert the existing US 395 to a frontage road and the other would use the existing US 395 lanes as the northbound lanes. Both options are considered in this analysis.

(i) Conversion of Existing Highway to Frontage Road

The resulting site access roadway configuration with the potential conversion of existing US 395 to a frontage road, is based on the Caltrans site plan for the "Combined Alternative" dated June 29, 2011. This plan indicates the frontage road would intersect the new US 395 at a point located about 300 feet to the north of the proposed site access roadway. It is estimated that only about 10 percent of the traffic would remain on the frontage road with the remainder shifting onto the new highway. With this configuration, most of the trips made to/from the Crystal Geyser project site would make a left turn into the site from the frontage road and a right turn out. The resulting LOS at the site access intersection was evaluated under this configuration, and the results are shown in the lower portion of Table 4.I-3. As indicated therein, the site access intersection along the frontage road is expected to operate at a good LOS (LOS A) during the Future (2031) A.M. and P.M. peak hours. Therefore, the proposed project would result in a less than significant impact under this scenario.

(ii) Conversion of Existing US 395 to New US 395 Northbound

With the potential conversion of existing US 395 to a divided four-lane highway at the site access point, the existing two-lane highway would become the northbound lanes and the southbound lanes would be constructed to the west of the existing highway. For the purposes of this analysis, a median crossover is assumed to be provided at the proposed project site access point. As shown in Table 4.I-3, an acceptable LOS (LOS C or better) would result in the Future (2031) A.M. and P.M. peak hours under this scenario. Even in the event that the median crossover is offset to the north of the site access roadway, the LOS is expected to be acceptable. In any case, Caltrans staff indicated that trucks accessing the new Crystal Geyser facility to/from the south on US 395 would be able to access US 395 southbound directly, without utilizing the roadways in the Cartago community in order to make a turnaround to access the US 395 southbound lanes. Therefore, the proposed project would result in a less than significant impact under this scenario.

TRAN-2The proposed project would not substantially increase hazards due to traffic volumes, a design feature (e.g., sharp curves or dangerous intersections), incompatible uses, or vehicles entering US 395.

(a) Intersection Need for Turn Lanes

As discussed above, a left-turn lane warrant analysis was performed for the project access point using the Guidelines for Reconstruction of Intersections (Caltrans 1985). With the existing highway configuration, the peak-hour intersection volume does not warrant a southbound left-turn lane along US 395 for southbound vehicles turning left into the site under Existing (2011) or Future (2031) scenarios with the proposed project, with or without the Caltrans 4-Lane Project.

As the Caltrans Guidelines do not provide a numerical right-turn lane warrant, the need for a right-turn lane along US 395 at the site access point was evaluated using the National Cooperative Highway Research Program's (NCHRP) Report 457 "Evaluating Intersection Improvements: An Engineering Study Guide" (Transportation Research Board, 2001). The peak-hour intersection volume does not warrant a northbound right-turn lane on US 395 under Existing (2011) or Future (2031) scenarios with the proposed project, with or without the Caltrans 4-Lane Project.

Although the peak-hour volumes do not warrant the need for new turn lanes, the proposed project would provide acceleration and deceleration lanes, as well as turning lanes, on both the northbound and

southbound side of US 395, in accordance with Caltrans requirements to better provide for turn movements. With regard to motorist safety along US 395, the northbound right-turn lane along US 395 for northbound vehicles turning right into the project site would provide a significant safety benefit, considering the level of truck traffic entering the site from the south. This right-turn lane would effectively separate trucks and other vehicles that are slowing to make a right turn into the site from those vehicles in the through-lane. Similarly, provision of a left-turn acceleration lane for vehicles exiting the site and traveling southbound along US 395 would minimize the acceleration time taking place in the southbound through-lane, thereby minimizing the disruption to through-traffic. The proposed project includes a southbound left-turn lane and a northbound right turn lane for vehicles entering the site from US 395, as well as acceleration lanes for vehicles exiting the site traveling either north or south on along US 395. As the proposed project would include these traffic design features, a less than significant impact with respect to motorist safety along US 395 would result.

(b) Driver Sight Distance

This project generates both passenger vehicle trips and truck trips. The impact of each type of vehicle is considered in the level of service calculations. Trucks are considered heavy vehicles and have a greater impact on traffic operations, due to the longer time it takes for trucks to pull out from a side street on to a main road. Trucks need a larger gap in traffic to complete this maneuver. As such, truck trip generation and vehicle trip generation are addressed separately below.

A detailed evaluation of the driver sight distance at the site access intersection along US 395 was performed as a part of this study. Driver sight distance is an important criterion to consider at this location, as drivers preparing to enter US 395 or a frontage road from an access roadway must be able to see and react to oncoming traffic in both directions in a safe manner. There are two types of sight distance criteria to consider at the site access location: stopping sight distance and corner sight distance.

(i) Stopping Sight Distance

Stopping sight distance requirements are meant to ensure that a driver on the approaching uncontrolled roadway (US 395) has adequate time to perceive and react to the presence of an obstruction in the roadway, and come to a stop in a safe manner. This is the minimum distance needed for a driver on US 395 approaching the proposed site access roadway to see an object in their travel path (such as a vehicle exiting the site access roadway) and safely come to a stop. The Caltrans Highway Design Manual specifies minimum stopping sight distance requirements as a function of roadway design speed. Based upon a posted speed limit of 55 mph on US 395, the required stopping sight distance is 500 feet. More than 700 feet of stopping sight distance is provided for drivers approaching the proposed project access point in either direction along US 395. Therefore, adequate stopping sight distance would be provided at this intersection and a less than significant impact would result.

(ii) Corner Sight Distance

The corner sight distance requirements are meant to provide 7.5 seconds for the driver on the crossroad to complete the necessary maneuver, while the approaching vehicle travels at the assumed design speed of the major roadway. These requirements are based primarily on consideration of the passenger car as the design vehicle. However, most of the traffic turning left out of the site consists of truck traffic. The required sight distance for trucks turning left onto a crossroad is substantially longer than that for passenger cars. The corner sight distance requirements for single-unit and combination trucks can be estimated using tabulated

values provided by the American Association of State Highway and Transportation Officials (AASHTO) in A Policy on Geometric Design of Highways and Streets. Assuming a design speed of 55 miles per hour on US 395, the required corner sight distance for a single-unit truck is calculated to be about 770 feet. Similarly, the required corner sight distance for a combination truck is approximately 930 feet. Over 1,200 feet of corner sight distance would be provided at the proposed site access point. As this exceeds the minimum requirements, the corner sight distance is considered to be adequate. Further, as mentioned above, the proposed project would provide a southbound acceleration lane along US 395 for vehicles turning left out of the project site to provide these vehicles an extra opportunity to accelerate after leaving the site. Therefore, the proposed project would result in a less than significant impact with respect to corner sight distance.

(iii) Driver Sight Distance With Caltrans Project

Assuming the potential conversion of the existing Highway 395 to a frontage road, adequate driver sight distance would be provided at the site access intersection, considering that travel speeds along the frontage road are expected to be the same as or lower than those along the existing highway.

Assuming the conversion of existing US 395 to a 4-lane divided highway, the prevailing travel speed along the new highway is expected to increase to about 65 mph. At 65 mph, the required stopping sight distance for passenger cars is about 660 feet, while the corner sight distance for passenger cars is about 715 feet. In addition, the corner sight distance requirements for single-unit and combination trucks are approximately 910 feet and 1,100 feet, respectively. As over 700 feet of stopping sight distance and over 1,200 feet of corner sight distance would be provided at the proposed site access roadway's connection to US 395, no driver sight distance deficiencies are identified and a less than significant impact would result.

3. MITIGATION MEASURES

As concluded above, with the implementation of the project's proposed traffic design features (i.e., acceleration/deceleration lanes, turn lanes), the proposed access point would operate at LOS C or better during both the A.M. and P.M. peak hours and a less than significant impact would result. Additionally, the proposed project would have adequate stopping sight and cornering sight distances, resulting in a less than significant impact with respect to safety. As the proposed project would result in a less than significant impact with the incorporation of the proposed traffic design features, no mitigation measures are necessary.

4. CUMULATIVE IMPACTS

As discussed above, the TIA determined that none of the related projects defined in **Section 3.0**, *General Description of Environmental Setting*, would produce a measurable increase in traffic along US 395 within the vicinity of Cartago or the project site. As such, any traffic growth on US 395 in the project vicinity from related projects is assumed to be captured in the ambient growth volumes, as determined by Caltrans. According to Caltrans, estimated the average annual growth rate in traffic volumes along US 395 will be 1.3 percent for the next 20 years. As concluded above in the project's evaluation of Future (2031) With Project conditions, the proposed project, in combination with ambient traffic growth along US 395 would result in a less than significant impact. As a result, the proposed project would result in a less than significant cumulative impact.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The proposed project would result in a less than significant impact with respect to roadways and intersections in Inyo County and no mitigation measures are required.

5.0 ALTERNATIVES

A. INTRODUCTION

CEQA requires that an EIR describe a reasonable range of alternatives to the project, or to the location of the project that could feasibly avoid or lessen significant environmental impacts while substantially attaining the basic objectives of the project. An EIR should also evaluate the comparative merits of the alternatives. This section sets forth potential alternatives to the proposed project and evaluates them, as required by CEQA.

Key provisions of the CEQA Guidelines (Section 15126.6) pertaining to the alternatives analysis are summarized below.

- The discussion of alternatives shall focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.
- The no project alternative shall be evaluated along with its impact. The no project analysis shall discuss the existing conditions at the time the notice of preparation is published, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.
- The range of alternatives required in an EIR is governed by a "rule of reason"; therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project.
- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.
- An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.
- Based on the alternatives analysis, CEQA requires that an environmentally superior alternative be designated. If the environmentally superior alternative is the No Project Alternative, then the EIR is required to identify an environmentally superior alternative among the other alternatives.
- In addition, CEQA requires that an EIR identify any alternatives that were considered for analysis but rejected as infeasible. Such potential alternatives are described below.

The range of alternatives discussed in an EIR is governed by the "rule of reason," mentioned above, that requires the identification of only those alternatives necessary to permit a reasoned choice between the alternatives and the proposed project. The range of feasible alternatives is selected and discussed in a manner to foster meaningful public participation and informed decision-making. Among the factors that may be taken into account when addressing the feasibility of alternatives (as described in CEQA Section 15126.6(f)(1)) are site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the proponent could reasonably acquire, control, or otherwise have access to the alternative site. An EIR need not consider an alternative if its effects cannot be reasonably identified, its implementation is remote or speculative, or if it would not achieve the basic project objectives.

This analysis includes No Project Analysis, as required by CEQA, which shows how the Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Facility Project's impacts would be avoided with no material change in the existing uses and conditions on the site. Two additional alternatives were selected to address the project's significant impacts. All project impacts were determined to be reduced to less than significant levels with required mitigation; no impacts were found to be significant and unavoidable.

B. PROJECT OBJECTIVES

The objectives of the proposed Crystal Geyser Roxane Cabin Bar Ranch Water Bottling Project are as follows:

- To construct and operate a new spring water bottling facility and ancillary uses to meet increasing market demand for Crystal Geyser Roxane bottled spring water.
- To site the proposed facility within Cabin Bar Ranch, to take advantage of the availability and high quality of existing spring water on the property which meets the regulations of the US Food and Drug Administration Agriculture and the California State Department of Public Health governing bottled water product quality.
- To site the new bottling facility in proximity to the existing bottling facility, to realize economic and environmental efficiencies through shared use of raw materials for packaging, transportation of finished products, management, and other inputs required for Crystal Geyser Roxane's operations.
- To construct the new water bottling facility in a manner that incorporates sustainable building and design practices, recycling efforts and other conservation methods, in order to reduce energy consumption and greenhouse gas emissions.
- To withdrawal groundwater in a sustainable manner that does not result in negative effects to nearby springs or wells, the underlying shallow or deep aquifers, or the surrounding environment.
- To construct a rooftop solar photovoltaic array as part of the water bottling facility prior to completion of full project buildout, to further reduce electricity consumption by the new water bottling facility.
- To create new employment opportunities for the local and nearby communities, promote sustainable economic development, provide for adequate services and infrastructure to support the project, and contribute to the County's tax base.

C. SELECTION OF ALTERNATIVES

Section 15126.6(c) of the *CEQA Guidelines* states that an EIR must briefly describe the rationale for selection and rejection of alternatives to be discussed in the EIR. The lead agency may make an initial determination as to which alternatives are feasible and therefore merit in-depth consideration, and which are infeasible, and provide a brief explanation of the reasons for their exclusion. Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, need not be considered (*CEQA Guidelines*, Section 15126.6(f)(3)). Alternatives may be eliminated from detailed consideration in the EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid any significant environmental effects (*CEQA Guidelines*, Section 15126.6(c)).

1. Significant Project Effects

The alternatives evaluated in this Draft EIR were selected based on their potential to avoid or reduce potentially significant impacts of the proposed project, particularly those that could not be mitigated to a level below the threshold of significance. The proposed project would result in the following project-specific or cumulative significant and unavoidable impacts, or significant but mitigable impacts:

(a) Air Quality

Construction Impacts

Project construction, including mass and fine grading, excavation, and paving activities affecting an area of approximately 14.59 acres would generate particulate matter (i.e., fugitive dust) and increase PM_{10} concentrations in the area. Cabin Bar Ranch is located within the Great Basin Valley Air Basin, and fugitive dust emissions in the basin are regulated by the Great Basin Unified Air Pollution Control District (GBUAPCD). The GBUAPCD does not require quantification of fugitive dust, but instead maintains that all fugitive dust emissions from construction activities represent a potentially significant, although mitigable, impact. Project construction would therefore result in significant fugitive dust impacts. With required mitigation, which enforces compliance with GBUAPCD Rule 400 and 401 dust control measures, impacts would be reduced to a less than significant level.

(b) Biological Resources

Special Status Plants

The Owen's Valley checkerbloom, a State Endangered species, is found only in the Owen's Valley and the presence of between 1,500 and 2,000 specimens on Cabin Bar Ranch was documented in 1988. This species may still be present on the project site, and its removal as the result of project construction would be considered a significant impact.

Other special status plant species that have the potential to occur on the project site due to the presence of potentially suitable habitat include Tulare rockcress, upswept moonwort, scalloped moonwort, mingan moonwort, Kern Plateau bird's beak, sanicle cymopterus, Kern River fleabane, field ivesia, creamy blazing star, Charlotte's phacelia, Parish's popcorn-flower, Bailey's greasewood, Owen's Valley checkerbloom, cut-leaf checkerbloom, marsh arrow-grass, and grey-leaved violet. The removal of any specimens of these plants as the result of project construction would be considered a significant impact.

With implementation of the required mitigation, which includes focused surveys and, if special status plant specimens are found and cannot be be avoided, the preparation of a Species Mitigation and Monitoring Plan (SMMP) and specimen replacement at an off-site location at a minimum 1:1 ratio, impacts would be reduced to a less than significant level.

Special Status Wildlife

Sensitive wildlife species with the potential to occur on the project site due to the presence of suitable habitat include Owen's tui chub, Owen's pupfish, Swainson's hawk, loggerhead shrike, yellow breasted chat, least bittern, least Bell's vireo, spotted bat, Owen's Valley vole, and Mohave ground squirrel.

With respect to the yellow breasted chat, yellow warbler, and Least Bell's vireo, with implementation of the required mitigation measures, which include focused surveys and, if impacts cannot be avoided, either the creation or restoration of off-site habitat or riparian woodland or payment of in-lieu fees, impacts would be reduced to a less than significant level.

With respect to the Owens tui chub, Owens pupfish, and Owens speckled dace, with implementation of the required mitigation measures, which require focused surveys and, if impacts cannot be avoided, payment into an approved off-site mitigation bank or in-lieu fee agreement, or off-site relocation, impacts would be reduced to a less than significant level.

With respect to the Swainson's hawk, with implementation of the required mitigation measure, which includes focused surveys and, if impacts cannot be avoided, preparation of a Swainson's hawk Monitoring and Mitigation Plan in consultation with the California Department of Fish and Game (CDFG), impacts would be reduced to a less than significant level.

Finally, with respect to the Mohave ground squirrel, with implementation of the required mitigation measure, which includes focused surveys and, if impacts cannot be avoided, relocation to off-suite habitat acquired and managed for the purpose, payment to eliminate grazing in an area of otherwise suitable habitat, or the restoration of suitable habitat for the species, impacts would be reduced to a less than significant level.

Sensitive Plant Communities

One sensitive plant community, a red willow thicket of approximately 4.20 acres in size, is present in the project area on Cabin Bar Ranch. Project construction would remove approximately 2.88 acres of this thicket, which is considered a significant impact. With implementation of the required mitigation measures, which includes preparation of a mitigation and monitoring plan for the restoration of similar, but disturbed, habitat on-site or off-site, and sets forth performance standards concerning implementation of the plan, maintenance, monitoring, success criteria, and long-term management, impacts would be reduced to a less than significant level.

"Waters of the U.S.," "Waters of the State," and Wetlands

The area potentially affected by the proposed project supports approximately 6.03 acres of U.S. Army Corps of Engineers/Regional Water Quality Control Board (ACOE/RWQCB) jurisdictional "waters of the U.S." and 6.16 acres of CDFG jurisdictional streambed and associated riparian habitat, including 5.97 acres of wetlands. Approximately 0.06 acres of non-wetland ACOE/RWQCB jurisdictional "waters of the U.S." and 0.19 acres of CDFG jurisdictional streambed is present within the portion of Cartago Creek and the man-made ditch that cross the project site and adjacent land. The wetlands are in the eastern portion of the project site, adjacent to the Owens Lake Playa.

Project implementation would permanently impact, through removal, approximately 0.01 acre of non-wetland ACOE/RWQCB "waters of the U.S." and 0.12 acres of CDFG jurisdiction associated with Cartago Creek, to install a culvert crossing for the proposed new access road from US 395. Project implementation would also permanently impact approximately 0.03 acres of non-wetland ACOE/RWQCB jurisdiction and 0.04 acres of CDFG jurisdiction within an unvegetated man-made swale on the proposed site of the main

bottling facility. Permanent impacts to non-wetland ACOE/RWQCB "waters of the U.S." therefore total approximately 0.04 acres, and permanent impacts to non-wetland CDFG jurisdictional resources total 0.16 acres for the proposed project. These are considered significant impacts. Required mitigation includes the procurement of a Clean Water Act (CWA) Section 404 Permit from the ACOE, a CWA Section 401 Water Quality Certification from the RWQCB, and California FGC Section 1602 Streambed Alteration Agreement from the CDFG. Required mitigation would also include either a minimum 1:1 on- and/or off-site replacement of affected ACOE/RWQCB and CDFG jurisdictional resources (or as required by the agencies), or the purchase of mitigation credits at an agency-approved mitigation bank, or in-lieu fees. With implementation of these mitigation measures, impacts would be reduced to less than significant levels.

Project implementation also has the potential to result in permanent impacts on jurisdictional resources as the result of reduced spring flows along the Spring Line fault and the seasonal lowering of the groundwater table due to pumping. Under the "long-term" scenario, with a combined average pumping rate of 170 gallons per minute (gpm) throughout the year, the decrease in streamflow along the Spring Line fault was estimated to be approximately 17 percent. Under a short-term, high-production pumping scenario, with a combined average pumping rate of 500 gpm during the three-month summer period, the decrease in flows along the Spring Line fault were estimated to be approximately 38 percent.

Project-related groundwater pumping, assuming a year-round average pumping rate of 225 gpm, was estimated to result in a theoretical drawdown of groundwater levels by 0.54 feet in in wells CGR-1 and CGR-3, south of Cabin Bar Ranch, after 30 days of continuous pumping, and a maximum theoretical drawdown of 1.21 feet after 360 days of continuous pumping in piezometer P-12, near the ranch's northern property boundary. Models prepared by previous consultants and cited in the *Hydrogeotechnical Evaluation* predicted groundwater level drawdown of between 0.20 and 0.60 feet in other area wells.

Accordingly, groundwater pumping effects on the water table level may indirectly impact up to 6.0 acres of ACOE/RWQCB jurisdictional "waters of the U.S." and 5.99 acres of CDFG jurisdictional streambed and associated riparian habitat, of which approximately 5.97 acres are wetlands. This is considered a potentially significant impact. Mitigation to reduce this impact to a less than significant level is provided in Section 3.2.c.

Nesting Birds

The project site has the potential to support raptor and songbird nests because of the presence of suitable habitat in the form of trees, shrubs, and ground cover. The disturbance or destruction of active nests is a violation of the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et seq.) and the California Department of Fish and Game Code Sections 3503, 3503.5 and 3513, and nests and eggs are also protected under Fish and Game Code Section 3503. Accordingly, the removal of habitat during the breeding season is considered a potentially significant impact. With the required mitigation measure, which stipulates that construction avoid the nesting season or that preconstruction surveys be conducted and buffers established as necessary, impacts to migratory raptor and songbird species would be reduced to a less than significant level.

Adopted Habitat Conservation Plan

Approximately 10 acres of the project site lies within the Southern Owens Conservation Area of the *Owens Basin Wetland Aquatic Species Recovery Plan for Inyo and Mono Counties* (USFWS 1998) ("Recovery Plan"). The goal of the Recovery Plan is to delist, or protect before listing becomes necessary, Tier 1 plant and

wildlife species endemic to the Owens Basin wetland and aquatic systems. The Recovery Plan also addresses Tier 2 species associated with wetland and aquatic ecosystems outside the Owens Basin that warrant specific management guidelines to stabilize populations within the basin. Impacts on the potentially affected species were addressed in the Draft EIR in the impact analysis for Special Status Plants and Special Status Wildlife. The required mitigation measures addressing those Special Status species would reduce any impacts related to potential conflicts with an adopted Habitat Conservation Plan to a less than significant level.

(c) Cultural Resources: Paleontological/Archaeological Resources

The project would not cause a substantial adverse change in the significance of a known archaeological resource. However, given the known presence of more than 30 archaeological resources within and in the immediate vicinity of the project site, the sensitivity of the project site with respect to buried archaeological resources is considered high and impacts on buried archaeological resources are considered potentially significant.

Native American human remains have been encountered during past construction in the project area and several known Native American cemeteries exist in the immediate vicinity of Cabin Bar Ranch and elsewhere in the project area. Although the project would not disturb any known human remains, the potential exists for construction to disturb previously unknown human remains. The overall sensitivity of the project site with respect to buried human remains is therefore considered high and impacts on buried human remains are considered potentially significant.

Several fossil localities have been identified in the project region within rock units known to underlie Cabin Bar Ranch. Although no paleontological resources were observed during site surveys, deep excavations could encounter paleontological resources (vertebrate fossils). Therefore, although the project would not directly or indirectly destroy a known unique paleontological resource or site or unique geologic feature, the potential exists for construction to disturb previously unknown paleontological resources. The overall sensitivity of the project site with respect to buried paleontological resources is therefore considered high and impacts on buried paleontological resources are considered potentially significant. Mitigation measures are identified to ensure less than significant impacts.

(d) Cultural Resources: Historical Resources

The project site was once part of a 160-acre ranch known in the late 19th century as the Gomez Ranch. One of the existing residences on Cabin Bar Ranch, known as Residence 2, contains a squared timber wall which appears to remain from a ca. 1871 cabin constructed as a homestead by Espitacio Gomez, the first ranch owner. Although Residence 2 lacks integrity as an architectural resource because of substantial structural alterations over time, it retains the potential to yield important information about significant historic activities conducted on the project site. Project construction would demolish Residence 2, resulting in the potential loss of important information pertaining to the property's historical significance. This is considered a significant impact. With implementation of the required mitigation, which includes construction monitoring and the photographic and written recordation of any findings by a qualified architectural historian or historical archaeologist to preserve important information about the history of the site, this impact would be reduced to less than significant.

2. Alternatives Considered but Rejected

(a) Expansion of Existing Olancha Crystal Geyser Bottling Plant

The expansion of the existing Crystal Geyser bottling plant in Olancha, one-half mile to the south of the proposed project site, was initially considered. The plant is located directly adjacent to U.S. 395 on the west and is bordered by single-family residential uses to the north and by undeveloped Department of Fish & Game or the State Lands Commission lands and the western shoreline of Owens Lake, and associated wetlands, to the northeast, east, and south. The plant has expanded several times since starting operations at this location in 1990, but the surrounding land uses constrain further expansion. Moreover, Crystal Geyser leases the land on which the Olancha plant is located (the Elton Lease Parcel) and does not currently have the option to expand its facility on this property. Crystal Geyser has water rights to pump groundwater from existing wells on the property, but cannot pump sufficient additional groundwater to support demand for its bottled water products.

For these reasons, this alternative was not carried forward for detailed evaluation in the Draft EIR.

2. Alternative Project Location

The primary reason for locating the proposed water bottling facility on Cabin Bar Ranch is because of favorable hydrogeologic conditions, and in particular, the presence of the Spring Fault line on the project site, which creates a line of surface springs where runoff from the Sierra Nevada Mountains flows toward Owens Lake as surface flow and within underground aquifers, The portion of Cabin Bar Ranch west of US 395 was not considered for development of the proposed project, due to the lack of suitable hydrogeology, as well as relatively small land area available for construction.

CGR also seeks to construct and operate a new bottling facility in close proximity to its current plant in Olancha, for reasons of logistics and economy. Having secured Cabin Bar Ranch and the associated water rights to support the proposed bottling facility because of the favorable hydrogeologic conditions and proximity to the existing Olancha bottling facility, CGR cannot feasibly develop a bottling facility on another site in the project area.

D. ALTERNATIVES TO THE PROPOSED PROJECT

1. Summary of Alternatives

The alternatives analyzed include the mandatory No Project Alternative, a Reduced Operations Alternative, and a Project Site Reconfiguration Alternative. Both were selected due to their potential to at least partially meet the basic objectives of the proposed project, and to lessen or avoid significant environmental effects resulting from implementation of the proposed project.

No Project Alternative. Section 15126.6(e) of the CEQA Guidelines requires the analysis of a No Project Alternative. This no project analysis must discuss existing conditions, as well as what would be reasonably expected to occur in the foreseeable future if the project were not to be approved based on current plans, site zoning, and consistent with available infrastructure and community services. Because the proposed project is a development project, Section 15126.6(e)(3)(B) of the *CEQA Guidelines* is directly applicable to the proposed project.

> "If the project is a development project on an identifiable property, the "no project" alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved. If disapproval of the project would result in predictable actions by others, such as the proposal of some other project, this "no project" consequence should be discussed. In certain instances, the "no project" alternative means "no build" wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment."

For purposes of Alternative 1, the No Project Alternative, it is assumed that the proposed water bottling facility would not be constructed and that the land would remain in its currently undeveloped state, with no water being pumped from the existing on-site wells. As such, environmental impacts associated with implementation of the proposed project would not occur.

Under the No Project Alternative, while the project site and Cabin Bar Ranch could remain undeveloped, a reasonably foreseeable consequence of project non-approval is the future sale and redevelopment of all or a portion of Cabin Bar Ranch. A 17.90-acre portion of the 420-acre ranch has already been subdivided into 16 lots and has approved plans and entitlements for the construction of a residential development of up to 16 single-family homes. These parcels are currently zoned Residential Rural – one-acre minimum (RR-1.0). This development project may still be constructed in the future, with no additional discretionary permits needed to do so. The comparative evaluation of this alternative assumes this possible no-project consequence, in addition to the no-build consequence.

Reduced Operations Alternative. The Reduced Operations Alternative assumes a smaller water bottling facility compared to the proposed project, with facilities and bottling capacity reduced by 50 percent. Only the Phase I bottling facility would be constructed, consisting of two bottling lines and four loading docks would be constructed. Components constructed under this alternative would include a new permanent access road from US 395, a fire suppression building, on-site underground water lines serving the bottling operations, a stormwater detention basin, a leach mound system, fire hydrants, and a fire access road. The volume of groundwater pumped under this alternative would be reduced by up to 50 percent compared to the proposed project.

Project Site Reconfiguration Alternative. Under the Project Site Reconfiguration Alternative, the water bottling facility and ancillary facilities would still be constructed, but would be relocated within Cabin Bar Ranch adjacent to US 395, south of Cartago Creek and in the vicinity of the proposed new roadway access from US 395. This was determined to be the only other sizeable developable area on Cabin Bar Ranch, given the presence of sensitive archaeological and biological resources on other areas of the property, as well as the presence of existing springs and wells. This area is also in close proximity to US 395 and would therefore minimize the need for new access roadway construction on the ranch. Phases I, II and III of the proposed project would be constructed as proposed under the project. Construction would take place in the same number and sequencing of phases as the proposed project. At buildout, the plant would be the same size as the proposed project, and with the same bottling capacity, and the same volume of groundwater proposed to be pumped under the project would be pumped under this alternative.

5.0 ALTERNATIVES
A. ALTERNATIVE 1: NO PROJECT

1. DESCRIPTION OF THE ALTERNATIVE

The No Project Alternative assumes that the proposed project, including the 198,500-square-foot spring water bottling plant and 40,000-square-foot storage warehouse, would not be constructed. Other features proposed as part of the project that would not be constructed include the new permanent access road from US 395 (including the Cartago Creek crossing), a fire suppression building, and proposed new infrastructure including on-site underground water lines, a stormwater retention basin, a leach mound wastewater disposal system, fire hydrants, and a fire access road. The two existing vacant single-family homes proposed for demolition as part of the project would remain on-site. CGR would not pump groundwater for production or any other purposes from the shallow aquifer beneath Cabin Bar Ranch, but instead would continue operations in its Olancha facility, with no increase in groundwater pumping or production at that location.

CGR purchased Cabin Bar Ranch for the purpose of developing the proposed water bottling facility on a portion of the property. In the absence of proposed project approval and implementation, it is assumed that that the property would remain in its currently undeveloped state. Since CGR owns the groundwater pumping rights to Cabin Bar Ranch, it could lease those rights to another entity for other commercial or domestic purposes, just as it currently leases groundwater pumping rights for the Olancha water bottling facility on the Elton Lease Parcel.

It is also reasonably foreseeable that a portion or the entirety of Cabin Bar Ranch would be sold, since its value to CGR is primarily its potential as the site of a new water bottling facility. In that event, the 17.90-acre portion of the ranch for which residential subdivision plans for 16 homes have already been approved and entitlements granted could be developed without the need for any further discretionary approvals. This area is in the approximate location of the proposed project's water bottling facility, in the northeastern corner of the 420-acre ranch.

2. ENVIRONMENTAL IMPACT ANALYSIS

a. Aesthetics

i. Views and Scenic Vistas

Under the No Project Alternative, assuming the proposed project is not implemented and the property remains under CGR's ownership, the aesthetic character of the project site would remain generally unchanged from existing conditions. Since no new construction is proposed under the No Project Alternative, there would be no construction-related impacts on views and scenic vistas, and the current views across the site from off-site vantages including US 395 would remain unchanged. As such, there would be no construction-related impacts on views and scenic vistas, and impacts would therefore be less than those of the proposed project.

Under the No Project Alternative, there would be no operational impacts on views and scenic vistas, since the water bottling facility and associated infrastructure would not be constructed and the two existing

residences would remain. Current views across the site would remain unchanged, and operational impacts to views and scenic vistas would be less than those under the proposed project.

In the event that the approved 17.90-acre residential subdivision is developed on the ranch, impacts on views and scenic vistas would likely still be less than significant, but could be greater than those of the proposed project, since 16 residences and associated infrastructure could be more visible from off-site locations including US 395 and Cartago.

ii. Visual Character

Under the No Project Alternative, the visual character of the project site would remain generally unchanged from its existing condition, unless the site is sold and otherwise developed with another more intensive use in the future. Since no new construction is proposed under the No Project Alternative, there would be no construction-related impacts (i.e., road-building, erection of buildings, etc.) affecting the visual character of the site. Construction impacts on visual character under this alternative would be less than those of the proposed project.

Likewise, under the No Project Alternative, there would be no operational impacts to the visual character of the site (visible buildings, regular truck delivery and transport activity, etc.). The ranch would remain undeveloped and primarily rural in nature, predominantly characterized by brush and scrub. The No Project Alternative would have a less than significant impact on visual character and impacts would be less than those of the proposed project.

The 17.90-acre portion entitled for a residential subdivision, in the northeastern corner of the project site where the bottling plant is proposed under the project, could be developed, which would change the visual character of that portion of the project site. Operational impacts on visual character under this Alternative could be greater than those of the proposed project, since a residential development is likely to be a more visually intensive use of the site.

iii. Light and Glare

Under the No Project Alternative, there would be no new construction proposed, and therefore no construction-related light and glare. The existing condition of the site is rural and unlighted at night, with the exception of the caretaker home to the south of the proposed project site, and it would remain in its current state. Construction-related light and glare under this alternative would be less than those under the proposed project.

Under the No Project Alternative, the site would not be developed with a water bottling facility, the site would remain in its current rural and unlighted state, and no new sources of light and glare would exist. Operational impacts to light and glare as a result of the proposed project are less than significant; the proposed water bottling facility would initially only operate between 7:00 AM and 11:00 PM, and at buildout would operate 24 hours per day (during peak spring and summer months), but is sited within the interior of the site with only limited visibility from off-site vantages. Exterior lighting would be present around the facility, roadways, parking areas and loading docks at night, but the light sources would be designed in such

a way to minimize spill-over and reduce lighting impacts to less than significant levels. The facility would not be built with reflective materials, so glare impacts would be less than significant.

In the event that the approved subdivision is constructed in the northwestern corner of the property in the location of the proposed water bottling facility, that portion of the ranch could be more brightly illuminated at night than the proposed project since there would be lighted residences and streets. While operational lighting impacts would still likely be less than significant, they would be greater than those of the proposed project.

b. Air Quality

(1) Air Quality

The No Project Alternative would not involve construction or operation of the water bottling facility, and as such, any resulting air quality impacts from project construction would not occur. Air emissions and fugitive dust would be limited to those that currently exist on site today, from both stationary sources (dust generated on-site and by Owens Lake) and mobile sources (cars and trucks along US 395 and accessing the project site). Construction and operational impacts on air quality under the No Project Alternative would avoid the (less than significant) impacts of the proposed project.

If the approved residential subdivision site is developed, this would generate construction-related air emissions and dust, and potentially greater mobile source air emissions, than the proposed project. Operational impacts would be reduced compared to the proposed project.

(2) Global Climate Change

Under the No Project Alternative, there would be no construction on the site, and operation of the proposed water bottling facility would not occur. The project site would remain undeveloped and rural, and greenhouse gas emissions would avoid the impacts of the proposed project.

If the approved residential subdivision is constructed, construction and operation would generate some greenhouse gases, since up to 16 residences plus associated utility infrastructure would be constructed, and associated trip generation would occur. Nonetheless, greenhouse gas emissions would still be less than those of the proposed project.

c. Biological Resources

Under the No Project Alternative, the approximately 14.59-acre portion of the project site subject to ground disturbance would not be developed; no indirect construction-related or operational impacts on biological resources on the remainder of the project site would occur; and operation of the water bottling facility would not occur. The project site would remain rural and undeveloped, with the majority of the site supporting native vegetation or former pasture. Under the proposed project, impacts to sensitive plant species, sensitive wildlife species, sensitive plant communities, jurisdictional features, nesting birds, and the designated habitat conservation area would be less than significant after mitigation. Impacts to biological resources could be avoided altogether if the site remains undeveloped.

In the event that some groundwater pumping takes place under a lease agreement with CGR, impacts would likely be less than significant, and would be incrementally less than those of the proposed project. Likewise, if the residential subdivision is developed, water consumption would be less than that of the proposed project and impacts on groundwater levels, and therefore indirect impacts on vegetation, would be less than those of the proposed project.

d. Archaeological and Paleontological Resources

Under the proposed project, impacts to archaeological and paleontological resources would be less than significant with mitigation incorporated. Since there would be no construction on the project site and no operation of the proposed water bottling facility under the No Project Alternative, there would be no ground-disturbing activities that could adversely affect archaeological and/or paleontological resources. As such, impacts on archaeological and paleontological resources would be less than those of the proposed project, if the project site remains in its currently undeveloped state.

If the approved residential subdivision is constructed, impacts on archaeological and paleontological resources would be substantially similar to those of the proposed project, since the subdivision is approved for development in the area proposed as the site of the water bottling facility and associated infrastructure.

e. Historical Resources

Since there would be no construction on the project site and no operation of the water bottling facility under the No Project Alternative, the demolition of Residence 2 would not occur and there would be no ground-disturbing activities would adversely affect historical resources potentially located in the area. Impacts on historical resources would be less than those of the proposed project, if the project site remains in its currently undeveloped state.

If the approved residential subdivision is constructed, demolition of Residence 2 could still take place and ground disturbance that could adversely affect historical resources could also occur. Under this scenario, the No Project Alternative could have a similar impact upon historical resources to the proposed project, including the demolition of Residence 2.

f. Land Use and Planning

The proposed project seeks a Zone Change to rezone a 23.46-acre portion of Cabin Bar Ranch to the M-2 (Light Industrial) zoning classification to accommodate the proposed water bottling facility. Of this, 11.04 acres are currently zoned RR-1.0 (Rural Residential, one-acre minimum) and 12.42 acres are currently zoned OS-40 (Open Space). These lots would be merged or extinguished as part of the proposed project. Under the No Project Alternative, the planned water bottling facility would not be constructed, and therefore no lot merger or lot line adjustments or Zone Change would be necessary, as the existing zoning designation and General Plan land use designations would remain unchanged. Land use impacts under the No Project Alternative would be less than those of the proposed project, whether the project site remains in its currently undeveloped state, is leased for groundwater pumping, or is developed in accordance with the approved residential subdivision for which entitlements already exist.

g. Hydrogeology

Under the No Project Alternative, if the site remains in its undeveloped state, there would be no construction and therefore no construction-related impacts with respect to wastewater discharge, groundwater supplies, surface hydrology, or degradation of water quality.

If the site is developed with the approved residential subdivision, existing wells on Cabin Bar Ranch could supply water for domestic use by those residences, and the shallow aquifer proposed as the project sources of production water would be the source of domestic water supplies. Assuming the average household consumption in the Owens Valley (approximately 1.12 acre-feet per year (AFY)), development of this subdivision would result in considerably less water use than the proposed project (approximately 360 AFY). Wastewater discharge would likewise be reduced compared to the proposed project. Since this alternative would develop a smaller area than the proposed project, impacts related to surface hydrology would also be reduced compared to the proposed project.

h. Noise

The No Project Alternative would avoid the noise impacts associated with the construction of the water bottling facility, if the site remains in its currently undeveloped state. Likewise, there would be no noise impacts from the operation of the water bottling facility proposed under the project, and the No Project Alternative would therefore avoid the proposed project's noise impacts altogether.

If the approved residential subdivision is constructed, construction noise impacts could be similar to that of the proposed project; operational noise impacts would likely be reduced compared to those of the proposed project, since the project would operate 24 hours a day at least part of the year following full buildout, and would involve some outdoor operations and truck delivery/transport activity.

i. Transportation

Assuming the project site remains in its current undeveloped state as a consequence of project non-approval, there would be no construction on the project site and therefore no construction worker trips or equipment or supply deliveries, and without operation of the proposed water bottling facility, there would be no employee trip generation or delivery/transport truck trip generation.

If the approved subdivision were constructed as a consequence of project non-approval, construction traffic could be similar to that associated with the proposed project. Operational trip generation and associated traffic impacts for the residential subdivision would, however, be reduced compared to the proposed project, which would require a maximum of 50 employees in three shifts around the clock (17 employees per shift) as well as deliveries and truck transport trips.

3. CONCLUSION AND RELATIONSHIP TO PROJECT OBJECTIVES

The No Project Alternative would not achieve the project objectives of constructing and operating a water bottling facility to meet increased market demand for bottled water; to site a facility on Cabin Bar Ranch and take advantage of the availability of high quality spring water existing on the site; to site a facility in proximity to the existing water bottling facility (in Olancha), realizing economic and environmental efficiency in doing so; to construct a facility that incorporates sustainable building and design principles and withdraws groundwater in a sustainable manner that does not result in negative effects to nearby springs or

wells, the underlying aquifers, or the surrounding environment; to construct a solar photovoltaic array to further reduce electricity consumption; and to create new economic opportunities for the nearby communities, support economic development and contribute to the County's tax base.

The No Project Alternative, therefore, would entirely preclude achieving any of the six project objectives defined in **Section 2.0, Project Description**, of this Draft EIR.

5.0 ALTERNATIVES
B. ALTERNATIVE 2: REDUCED OPERATIONS

1. DESCRIPTION OF THE ALTERNATIVE

The Reduced Operations Alternative assumes a scaled-down water bottling facility compared to the proposed project, with the footprint of the water bottling plant building and its bottling capacity reduced by 50 percent. Under this alternative, only the Phase I bottling facility would be constructed, consisting of two bottling lines and four loading docks would be constructed. As under the proposed project, the Phase I bottling line would be constructed, and as demand warranted, the second bottling line would be added, in a building totaling 106,500 square feet. Also as under the proposed project, components constructed under this alternative would include a new permanent access road from US 395, a fire suppression building, on-site underground water lines serving the bottling operations, a stormwater detention basin, a leach mound system, fire hydrants, and a fire access road. Because of the reduced number of bottling lines and capacity, the volume of groundwater pumped under this alternative would be reduced by up to 50 percent compared to the proposed project.

The two existing vacant single-family homes on the ranch near the proposed bottling facility would be demolished and removed, as under the proposed project, since this is necessary to clear the area surrounding the production wells of disused structures and any associated contamination of surface water quality and, ultimately, groundwater quality.

The warehouse proposed as part of the project would be constructed under this alternative, although its size would likely be reduced to correspond to the reduced capacity of the bottling facility.

The Phase II bottling facility planned under the proposed project to house two additional bottling line and four additional loading docks, at the northern end of the Phase I bottling facility would not be constructed under this alternative.

2. ENVIRONMENTAL IMPACT ANALYSIS

a. Aesthetics

i. Views and Scenic Vistas

Under this alternative, the amount of new construction would be reduced compared to the proposed project, since the Phase II bottling facility would not be constructed. Because of the proposed location of the Phase II bottling plant north of the Phase I plant building, its relatively smaller size compared to the larger Phase I bottling plant building, and the distance between the plant and US 395 to the west, construction impacts as on views of the project site from US 395, as well as views of plant operations, would be substantially similar to those under the proposed project. However, since this alternative would eliminate the 92,500-square-foot water bottling plant building and loading docks on the northern end of the Phase I bottling plant building, impacts on views of the project site from Cartago residences to the north would be reduced compared to the proposed project, since the nearest building would be approximately 350-400 feet from the northern property line under this alternative, compared to approximately 150 feet under the proposed project.

ii. Visual Character

The proposed bottling plant and ancillary facilities that would be constructed under the Reduced Operations alternative would represent a lesser intensity of development than the proposed project, since this alternative would eliminate the 92,000-square-foot addition housing two additional bottling lines and four loading docks at the northern end of the Phase I bottling plant facility. Since the project site would still be rezoned and developed with a nearly 200,000-square foot bottling facility, plus a warehouse and other ancillary infrastructure, and the associated construction and operational activity would be reduced in scale but would serve the same function, this alternative would have only incrementally reduced impacts on visual character compared to the proposed project.

iii. Light and Glare

The Reduced Operations Alternative would reduce the square footage to be constructed and illuminated compared to the proposed project, and would also reduce operations, and therefore nighttime lighting levels in the vicinity of the proposed water bottling facility. Reduced truck delivery and transport activity could reduce mobile sources of nighttime light and glare as well. Potential impacts with respect to light and glare would therefore be reduced compared to the proposed project.

b. Air Quality

(1) Air Quality

The Reduced Operations Alternative would involve less construction than the proposed project, including a reduced area subject to clearing, grading, and excavation, and reduced developed square footage. The duration of construction would also be shorter than that of the proposed project, since the Phase II, 92,000-square-foot bottling plant would not be constructed. Construction-related air quality impacts would therefore be reduced compared to the proposed project, but since construction would generate fugitive dust which is considered a significant impact by the GBUAPC, impacts would still be significant.

Operational air quality impacts would be reduced under the Reduced Operations Alternative because of the reduced size and capacity of the water bottling facility, as well as the reduced number of employee trips and delivery/transport truck trips.

(2) Global Climate Change

Under the Reduced Operations Alternative, the water bottling plant and ancillary facilities would still be constructed in compliance with CALGreen requirements that stipulate the recycling of construction waste and recycling or reuse of soil and construction debris. As with the proposed project, the Reduced Operations Alternative would generate GHG emissions through the operation of on-site equipment, vehicle trips, energy usage (natural gas, electricity), water usage, and waste generation. However, project operation is still subject to CalGreen codes that specify a minimum energy efficiency requirement and water usage reduction, which serve to reduce GHG emissions towards achieving AB 32 targets. Moreover, it is assumed that the same project design features proposed for the project, including on-site photovoltaic generation, cool roofs, alternative transportation (shuttles) and enhanced recycling, would be incorporated into this alternative.

For this reason, GHG emissions from construction and operation would be reduced compared to those of the proposed project.

c. Biological Resources

The reduced development footprint under the Reduced Operations Alternative would reduce impacts on biological resources, including sensitive plant species, sensitive wildlife species, sensitive plant communities, jurisdictional features, nesting birds, and the designated habitat conservation area, compared to the proposed project. However, since only the Phase II water bottling facility and four loading docks near the northern property line would be eliminated from proposed construction compared to the proposed project, and this is one of the less sensitive parts of the ranch, supporting predominantly rabbitbrush scrub and no sensitive plant communities or jurisdictional features, impacts on biological resources would be only slightly, incrementally reduced compared to the proposed project, and would still be potentially significant. The remainder of the development proposed as part of the project would be constructed under the Reduced Operations Alternative, and would affect the same resources.

d. Archaeological and Paleontological Resources

Because of the reduced building footprint under the Reduced Operations Alternative, the scope of construction, including clearing, grading, and excavation, would be reduced compared to the proposed project. Accordingly, the potential to uncover previously unknown archaeological and paleontological resources is correspondingly reduced compared to the proposed project.

e. Historical Resources

Under the Reduced Operations Alternative, Residence 2 would still be demolished since the intention is to clear the area surrounding the proposed production wells to eliminate potential for contamination of surface water and groundwater quality. Ground disturbance that could adversely affect historical resources would be slightly reduced compared to the proposed project, but since Residence 2, the only known historically significant resource potentially affected under the project, would be similarly affected under this alternative, impacts on historic resources would be substantially similar to those of the project.

f. Land Use and Planning

Although the Reduced Operations Alternative would reduce the size of the water bottling facility and operational capacity, project implementation would still necessitate a Zone Change to rezone a 23.46-acre portion of Cabin Bar Ranch, some of which is currently zoned RR-1.0 (Rural Residential, one-acre minimum) and some of which is currently zoned OS-40 (Open Space), to M-2 (Light Industrial). The 16 existing residential lots would still be merged or extinguished under this alternative. Therefore, land use impacts under this alternative would be similar to those of the proposed project.

g. Hydrogeology

Under the Reduced Operations Alternative, the capacity of the bottling plant constructed would be reduced compared to the proposed project by 50 percent, and the volume of groundwater would likewise be reduced by approximately 50 percent since production would be reduced. The same wells proposed as production wells under the project would likely be used for this alternative. Impacts on groundwater table depth and

off-site wells were determined to be less than significant for the proposed project; impacts would be reduced under this alternative compared to the project, and would likewise be less than significant. Since pumping would be reduced, the shallow aquifer would likely recover to pre-summer levels more quickly after the summer peak.

h. Noise

Construction noise impacts under this alternative would be reduced compared to the proposed project, since the amount of construction, including site clearing, grading and excavation, as well as the duration of construction, would be reduced compared to the proposed project. Construction would also take place farther from sensitive residential receptors north of the project site in Cartago, since the nearest building would be approximately 450-500 feet from the northern property line as opposed to approximately 150 feet under the proposed project.

Operational noise impacts would be reduced compared to the proposed project, since bottling capacity would be reduced; the nearest bottling plant building would be farther removed from the northern property line and sensitive residential receptors to the north in Cartago; and the amount of operations-related employee trips and truck deliveries and transport of product would be reduced.

i. Transportation

Construction under the Reduced Operations Alternative would be slightly reduced in scope and duration compared to the proposed project, and therefore construction traffic impacts would be comparatively reduced as well. Since plant bottling capacity would be reduced by 50 percent compared to the proposed project, employee trips and truck deliveries and transport of finished product would also be correspondingly reduced, and therefore traffic impacts would be reduced compared to the proposed project.

3. CONCLUSION AND RELATIONSHIP TO PROJECT OBJECTIVES

The Reduced Operations Alternative would only partially meet the project objective related to construction and operation of a spring water bottling facility to meet increasing demand. Because of the reduction in bottling capacity and therefore production, this alternative would not meet this objective to the degree that the proposed project would.

This alternative would fully achieve the following five project objectives: to site the facility in a manner that takes advantage of the availability of existing spring water; to site the new bottling facility in proximity to the existing CGR facility in Olancha to realize economic and environmental efficiencies; to construct the new bottling plant in a manner that incorporates sustainable building and design practices to reduce energy consumption and GHG emissions; to withdrawal groundwater in a sustainable manner that minimizes negative effects on the environment; and to construct a rooftop solar photovoltaic facility to reduce electricity consumption.

The Reduced Operations Alternative would partially achieve the objective related to creating new local employment opportunities, provide for adequate services and infrastructure to serve the project, and contribute to the County's tax base, since the reduced facility size, bottling capacity, and production would create fewer jobs, reduced revenue, and likely reduced infrastructure improvements.

5.0 ALTERNATIVES
C. ALTERNATIVE 3: PROJECT SITE RECONFIGURATION

1. DESCRIPTION OF THE ALTERNATIVE

Under the Project Site Reconfiguration Alternative, the water bottling facility and ancillary facilities would still be constructed as under the proposed project, but would be relocated within Cabin Bar Ranch to be adjacent to US 395, south of Cartago Creek and in the vicinity of the proposed new roadway access from US 395. This location is the only other sizeable area on Cabin Bar Ranch that could potentially be developed with the proposed facilities, since much of the ranch is either too close to, or on, the Owens Lake Shoreline; contains jurisdictional wetlands; or constitutes known archaeological resources that have been buried for reasons of preservation in situ.

It is assumed that Phases I, II and III of the proposed project would be constructed at this location, including a 198,500-square-foot spring water bottling plant building and ancillary facilities, a 92,000-square-foot water bottling plant building with two bottling lines and four loading docks, and a 40,000-square-foot storage warehouse. Construction would take place in the same number and sequencing of phases as the proposed project. At buildout, the plant would be the same size as the proposed project, and with the same bottling capacity. Accordingly, the same volume of groundwater proposed to be pumped under the project would be pumped under this alternative.

2. ENVIRONMENTAL IMPACT ANALYSIS

a. Aesthetics

i. Views and Scenic Vistas

Under the Project Site Reconfiguration Alternative, the same amount of construction would take place as under the proposed project. However, construction would take place almost immediately adjacent to the US 395 highway alignment, and would be nearly 2,000 feet from the northern property line of Cabin Bar Ranch, and from residences in Cartago north of the ranch. Therefore, impacts on views under this alternative would be greatly reduced from residential vantages north of the project site, but would be greatly increased for motorists along the US 396 highway alignment. Because of the proximity of the facilities to US 395, bottling plant and warehouse buildings are likely to partially to entirely obstruct views to the east from US 395.

ii. Visual Character

Under the Project Site Reconfiguration Alternative, the same facilities would be constructed as under the proposed project, including (at project buildout) four bottling lines and eight loading docks, a warehouse, and other ancillary facilities and infrastructure. Given the shape of the available, buildable area adjacent to US 395 and south of Cartago Creek, facilities would likely be redesigned and could occupy a more linear development footprint. However, the facilities would be highly visually prominent along the US 395 alignment, and because of their industrial design and function, would alter the rural character of that portion of Cabin Bar Ranch. Impacts on visual character, especially as perceived from US 395, would be much greater

than under the proposed project, which sites the proposed project as distantly as possible from US 395 in an already partially developed portion of the project site (i.e., the unrealized subdivision).

iii. Light and Glare

The Project Site Reconfiguration Alternative would develop the same amount of square footage as the proposed project and the same facilities, which would be illuminated in a manner similar to the project and therefore result in the same ambient nighttime light levels. The bottling plant location under this alternative moves facilities considerably farther away, to the south, from residences north of Cabin Bar Ranch in Cartago. Although the lighted facility would therefore be more highly visible from US 395, it would affect fewer sensitive receptors in Cartago than the proposed project, and light and glare impacts would therefore be reduced compared to the proposed project.

b. Air Quality

(1) Air Quality

The Project Site Reconfiguration Alternative would result in the a reduced amount and duration of construction as the proposed project, including clearing, grading, and excavation, since proximity to US 395 would eliminate the need for the lengthy access road from US 395 to the proposed project site location on the ranch property would. Construction air quality impacts would therefore be reduced compared to those of the proposed project. Operational air quality impacts would be similar to those of the proposed project, since operations would be the same.

(2) Global Climate Change

Under the Project Site Reconfiguration Alternative, the water bottling plant and ancillary facilities would still be constructed in compliance with CALGreen requirements that stipulate the recycling of construction waste and recycling or reuse of soil and construction debris. As with the proposed project, the Project Site Reconfiguration Alternative would generate GHG emissions through the operation of on-site equipment, vehicle trips, energy usage (natural gas, electricity), water usage, and waste generation. Operation of the facility under this alternative would still be subject to CalGreen codes that specify a minimum energy efficiency requirement and water usage reduction, which serve to reduce GHG emissions towards achieving AB 32 targets. It is assumed that the same project design features proposed for the project, including on-site photovoltaic generation, cool roofs, alternative transportation (shuttles) and enhanced recycling, would be incorporated into this alternative. For this reason, GHG emissions from construction and operation of this alternative would be similar to those of the proposed project.

c. Biological Resources

Under the Project Site Reconfiguration Alternative, impacts on the sensitive red willow thicket community would likely be reduced compared to the proposed project, since the area to be developed would be moved west of the majority of that community on the ranch, and the access roadway crossing of Cartago Creek required for the proposed project would not be necessary. However, impacts on other sensitive plant and wildlife species could be increased compared to the proposed project, including ACOE jurisdictional features. Although the entire ranch property was not surveyed for this project, it is conservatively concluded that, while relocation may avoid riparian and jurisdictional features affected by the proposed project, this

alternative could have comparable impacts on sensitive plant and wildlife species. Impacts on biological resources are therefore likely to be reduced compared to the proposed project, but would still be significant, albeit mitigable.

d. Archaeological and Paleontological Resources

Relocation of the proposed bottling facility closer to US 395, south of Cartago Creek, would avoid known archaeological resources on Cabin Bar Ranch, and the elimination of the majority of the access roadway between US 395 and the proposed project site in the northeast corner of the ranch would reduce the amount of necessary grading and disturbance. However, under the Project Site Reconfiguration Alternative, it is assumed that the potential exists to uncover previously unknown archaeological and paleontological resources on the proposed site of the facilities, since, unlike the proposed project, this alternative would not have the benefit of being developed partially on already disturbed land (i.e., the unrealized but partially constructed residential subdivision in the northeastern corner of the ranch). Overall, impacts are likely to be reduced compared to the proposed project because of the reduced area of disturbance, but impacts would still be significant, albeit mitigable.

e. Historical Resources

Under the Project Site Reconfiguration Alternative, Residence 2 would still be demolished since the intention is to clear the area surrounding the proposed production wells to eliminate potential for contamination of surface water and groundwater quality. Ground disturbance that could adversely affect historical resources would be slightly reduced compared to the proposed project due to the elimination of the lengthy access road between US 395 and the project site in the northeastern corner of the ranch, but since Residence 2, the only known historically significant resource potentially affected under the project, would be similarly affected under this alternative, and therefore impacts on historic resources would be substantially similar to those of the project.

f. Land Use and Planning

Although the Project Site Reconfiguration Alternative would relocate the water bottling facility closer to US 395, project implementation would necessitate a Zone Change to rezone a similarly-sized portion (approximately 24 acres) of Cabin Bar Ranch that is currently zoned OS-40 (Open Space), to M-2 (Light Industrial). The 16 existing residential lots in the northern would still be merged or extinguished under this alternative. Therefore, land use impacts under this alternative would be similar to those of the proposed project.

g. Hydrogeology

Under the Project Site Reconfiguration Alternative, the bottling plant facilities and infrastructure would be located in very close proximity to, if not on the site of, at least one of the production wells CGR proposes to pump as part of the proposed project: well CGR-10. For this reason, CGR could be required to drill new test wells to determine their suitability to serve the water bottling facility, and then build new wells and associated piping to the bottling facility. Moreover, the construction of the proposed facilities adjacent to the wells could increase the potential for contamination of surface water and groundwater quality. For these reasons, construction impacts with respect to hydrogeology would likely be greater than those of the proposed project.

With respect to operation, the same amount of groundwater would be pumped under the Project Site Reconfiguration Alternative as under the proposed project, and therefore operational impacts would be similar to those of the project.

h. Noise

Construction noise impacts under this alternative would be reduced compared to the proposed project in terms of impacts on off-site receptors. Although the same amount and duration of construction is proposed as under the proposed project, this alternative would place the water bottling facilities approximately 2,000 feet from the noise-sensitive residential receptors north of Cabin Bar Ranch in Cartago and therefore fewer receptors would be adversely affected. Likewise, although noise impacts were determined to be less than significant for the proposed project, impacts would be reduced compared to the project since fewer offsite receptors would be affected.

i. Transportation

Traffic impacts under the Project Site Reconfiguration Alternative would be similar to those of the proposed project, since the scale and duration of construction would be the same. Operations would also be the same as under the proposed project, with the same number of bottling lines, production capacity, and associated employee trips and truck deliveries and transport of product.

However, the planned realignment of US 395 by Caltrans, though not yet finalized in terms of design and impacts on the existing US 3965 alignment, would move the current highway to the west. This could have adverse impacts with respect to employee and delivery/transport truck access to and from the project site from US 395, and could necessitate redesign of the ingress/egress to the project site as well as of the plant facilities. For this reason, the location of the bottling facility close to US 395, as proposed under this alternative, is likely to result in greater traffic-related impacts, particularly with respect to access and circulation in the project vicinity, than the proposed project.

3. CONCLUSION AND RELATIONSHIP TO PROJECT OBJECTIVES

The Project Site Reconfiguration Alternative would fully achieve the project objective related to construction and operation of a spring water bottling facility to meet increasing demand, since the facility would only be relocated, and not reduced in terms of capacity.

This alternative would fully achieve the project objective related to siting the facility in a manner that takes advantage of the availability of existing spring water (although it could require the drilling of one or more new wells to maintain adequate distance between the plant and production wells, which would increase project costs); to site the new bottling facility in proximity to the existing CGR facility in Olancha to realize economic and environmental efficiencies; to construct the new bottling plant in a manner that incorporates sustainable building and design practices to reduce energy consumption and GHG emissions; to withdrawal groundwater ins a sustainable manner that minimizes negative effects on the environment; and to construct a rooftop solar photovoltaic facility to reduce electricity consumption.

The Project Site Reconfiguration Alternative would fully achieve the objective related to creating new local employment opportunities, provide for adequate services and infrastructure to serve the project, and contribute to the County's tax base, since facility would be constructed with the same capacity as the proposed project.

5.0 ALTERNATIVES
D. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The State CEQA Guidelines require the identification of an environmentally superior alternative to the proposed project and, if the environmentally superior alternative is the No Project Alternative, the identification of an environmentally superior alternative should be from among the remaining alternatives.[1] Selection of an environmentally superior alternative is based on an evaluation of the extent to which the alternatives would reduce or eliminate the significant impacts associated with the project, and on a comparison of the remaining environmental impacts of each alternative. The relative environmental characteristics of the proposed project, the No Project Alternative, Reduced Operations Alternative, and the Project Site Reconfiguration Alternative are summarized in Table 5-1.

Of the alternatives analyzed in this Draft EIR, the No Project Alternative, assuming the site remains undeveloped and in its current state, is considered the environmentally superior alternative, since it would avoid or reduce the most project impacts.

Since the No Project/No Action Alternative is determined to be the environmentally superior alternative, an alternative selection is required under CEQA. The Reduced Operations Alternative would reduce the proposed project's significant but mitigable impacts on air quality, biological resources, archaeological resources, paleontological resources, and historical resources. Therefore, the Reduced Operations Alternative is the environmentally superior alternative amongst the alternatives analyzed.

The Reduced Operations Alternative, however, would only partially meet the project objective related to construction and operation of a spring water bottling, since it would reduce the size and capacity of the proposed plant. Additionally, this alternative would only partially achieve the objective related to creating new local employment opportunities, provide for adequate services and infrastructure to serve the project, and contribute to the County's tax base, since the reduced facility size, bottling capacity, and production would create fewer jobs, reduced revenue, and likely reduced infrastructure improvements.

[1] *CEQA Guidelines, Section 15126.6(e)(2).*

Table 5-1

Comparison of Alternatives and Proposed Project

Project Phase	Project Impact	Alternative 1 No Project	Alternative 2 Reduced Operations	Alternative 3 Project Site Reconfiguration
Aesthetics				
Views and Scenic Vistas	Less Than Significant	Less (Continuation of Existing Conditions) (No Impact) Greater (Residential Subdivision) (Less than Significant)	Less (Less Than Significant)	Greater (Potentially Significant)
Visual Character	Less Than Significant	Less (Continuation of Existing Conditions) (No Impact) Greater (Residential Subdivision) (Less than Significant)	Less (Less Than Significant)	Greater (Potentially Significant)
Light & Glare	Less Than Significant	Less (Continuation of Existing Conditions) (No Impact) Greater (Residential Subdivision) (Less than Significant)	Less (Less Than Significant)	Less (Less Than Significant)
Air Quality				
Construction	Less Than Significant with Mitigation	Less (Continuation of Existing Conditions) (No Impact) Greater (Residential Subdivision) (Less Than Significant with Mitigation)	Less (Less Than Significant with Mitigation)	Similar (Less Than Significant with Mitigation)
Operation	Less Than Significant	Less (Continuation of Existing Conditions) (No Impact) Greater (Residential Subdivision) (Less Than Significant)	Less (Less Than Significant)	Similar (Less Than Significant)
Global Climate Change				
Project-Level	Less Than Significant	Less (Continuation of Existing Conditions) (No Impact) Greater (Residential Subdivision) (Less Than Significant)	Less (Less Than Significant)	Similar (Less Than Significant)

Table 5-1 (Continued)

Comparison of Alternatives and Proposed Project

Project Phase	Project Impact	Alternative 1 No Project	Alternative 2 Reduced Operations	Alternative 3 Project Site Reconfiguration
Cumulative	Less Than Significant	Less (Continuation of Existing Conditions) (No Impact) Greater (Residential Subdivision) (Less Than Significant)	Less (Less Than Significant)	Similar (Less Than Significant)
Biological Resources				
Project-Level	Less Than Significant with Mitigation	Less (Continuation of Existing Conditions) (No Impact) Less (Residential Subdivision) (Less Than Significant)	Less (Less Than Significant with Mitigation)	Less (Less Than Significant with Mitigation)
Cumulative	Less Than Significant with Mitigation	Less (Continuation of Existing Conditions) (No Impact) Less (Residential Subdivision) (Less Than Significant)	Less (Less Than Significant with Mitigation)	Less (Less Than Significant with Mitigation)
Archaeological and Paleontological Resources				
Archaeological Resources	Less Than Significant with Mitigation	Less (Continuation of Existing Conditions) (No Impact) Similar (Residential Subdivision) (Less Than Significant with Mitigation)	Less (Less Than Significant with Mitigation)	Less (Less Than Significant with Mitigation)
Paleontological Resources	Less Than Significant with Mitigation	Less (Continuation of Existing Conditions) (No Impact) Similar (Residential Subdivision) (Less Than Significant with Mitigation)	Less (Less Than Significant with Mitigation)	Less (Less Than Significant with Mitigation)
Historical Resources				
Construction	Less Than Significant with Mitigation	Less (Continuation of Existing Conditions) (No Impact) Similar (Residential Subdivision) (Less Than Significant with Mitigation)	Less (Less Than Significant with Mitigation)	Similar (Less Than Significant with Mitigation)

Table 5-1 (Continued)

Comparison of Alternatives and Proposed Project

Project Phase	Project Impact	Alternative 1 No Project	Alternative 2 Reduced Operations	Alternative 3 Project Site Reconfiguration
Hydrogeology				
Construction	Less Than Significant	Less (Continuation of Existing Conditions) (No Impact) Similar (Residential Subdivision) (Less Than Significant with Mitigation)	Less (Less Than Significant)	Greater (Potentially Significant)
Operation	Less Than Significant	Less (Continuation of Existing Conditions) (No Impact) Less (Residential Subdivision) (Less Than Significant)	Less (Less Than Significant)	Similar (Less Than Significant)
Land Use and Planning				
Operation	Less Than Significant	Less (Continuation of Existing Conditions) (No Impact) Similar (Residential Subdivision) (Less Than Significant with Mitigation)	Less (Less Than Significant)	Similar (Less Than Significant)
Noise				
Construction	Less Than Significant	Less (Continuation of Existing Conditions) (No Impact) Similar (Residential Subdivision) (Less Than Significant)	Less (Less Than Significant)	Less (Less Than Significant)
Operation	Less Than Significant	Less (Continuation of Existing Conditions) (No Impact) Similar (Residential Subdivision) (Less Than Significant)	Less (Less Than Significant)	Less (Less Than Significant)
Transportation				

Table 5-1 (Continued)

Comparison of Alternatives and Proposed Project

Project Phase	Project Impact	Alternative 1 No Project	Alternative 2 Reduced Operations	Alternative 3 Project Site Reconfiguration
Construction	Less Than Significant	Less (Continuation of Existing Conditions) (No Impact) Less (Residential Subdivision) (Less Than Significant)	Less (Less Than Significant)	Similar (Less Than Significant)
Operation	Less Than Significant	Less (Continuation of Existing Conditions) (No Impact) Less (Residential Subdivision) (Less Than Significant)	Less (Less Than Significant)	Greater (Potentially Significant)

Source: PCR Services Corporation, 2012.

6.0 OTHER ENVIRONMENTAL CONSIDERATIONS

A. SIGNIFICANT IRREVERSIBLE CHANGES

According to Section 15126.2(c) of the CEQA Guidelines, an EIR is required to evaluate significant irreversible environmental changes that would be caused by implementation of the proposed Project. As stated in CEQA Guidelines Section 15126.2(c):

> *"[u]ses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified."*

The project would necessarily consume limited, slowly renewable and non-renewable resources. This consumption would occur during the construction phase of the project and would continue throughout its operational lifetime. Project development would require a commitment of resources that would include: (1) building materials, (2) fuel and operational materials/resources, (3) the transportation of goods and people to and from the project site; and (4) the withdrawal of groundwater from the Owens Valley Groundwater Basin.

Project construction would require the consumption of resources that are non-replenishable or may renew so slowly as to be considered non-renewable. These resources would include the following construction supplies: certain types of lumber and other forest products; aggregate materials used in concrete and asphalt such as sand, gravel and stone; metals such as steel, copper, and lead; petrochemical construction materials such as plastics; and water. Furthermore, nonrenewable fossil fuels such as gasoline and oil would also be consumed in the use of construction vehicles and equipment, as well as the transportation of goods and people to and from the project site.

Project operation would continue to expend nonrenewable resources that are currently consumed within Inyo County. These include energy resources such as electricity and natural gas/propane, petroleum-based fuels required for vehicle-trips, fossil fuels, petroleum-based plastics, and groundwater. Fossil fuels would represent the primary energy source associated with both construction and ongoing operation of the project, and the existing, finite supplies of these natural resources would be incrementally reduced. Project operation would occur in accordance with Title 24, Part 6 of the California Code of Regulations and proposes a rooftop solar photovoltaic array as part of the water bottling facility prior to completion of full project buildout, to further reduce electricity consumption by the new water bottling facility to provide supplemental power. The project would also include other features to reduce the consumption of non-renewable resources. For instance, the proposed project would continue to employ recycling and conservation programs similar to those current implemented at the nearby CGR Crystal Geyser spring water bottling plant as a part of its regular operations, including programs for cardboard, wood pallets, PET preforms (which are plastic forms

that are blown into bottles), and other plastics. Further, the project would provide an employee shuttle and give preferential parking to fuel-efficient vehicles.

Nonetheless, even with these measures, the energy requirements associated with the project would still represent a long-term commitment of essentially nonrenewable resources. Continued use of such resources would be on a relatively small scale and consistent with regional and local growth forecasts in the area, as well as state and local goals for reductions in the consumption of such resources. Further, the project would not affect access to existing resources, nor interfere with the production or delivery of such resources.

Groundwater, in and of itself, is a renewable resource. However, when the rate of withdrawal in a given groundwater basin exceeds the normal rate of replenishment, it can lead to a reduced ability for adequate production of wells within the basin and cause negative effects on the natural environment related to the aquifer, including springs. The primary source of groundwater recharge in the Owens Valley Groundwater basin is from percolation of stream flow from the surrounding mountains. In the case of the project site and the Cartago area, the main aquifer is thought to recharge primarily by flow in Cartago Creek and Braley Creek that have watersheds to the west of the site in the Sierra Nevada Mountains. Stream flow in these creeks is derived from snowmelt and precipitation in the mountains and infiltrates through relatively permeable alluvium closer to the valley floor. Although the project proposes the withdrawal of approximately 360 acre feet per year (afy) from nearby springs and the Owens Valley Groundwater Aquifer, as demonstrated in **Section 4.G, Hydrogeology & Surface Hydrology**, of this Draft EIR, the project's proposed level of withdrawal would sustainably be replenished by the normal processes of recharge in the area and that the proposed project would not reduce groundwater levels to negatively affect nearby wells or springs.

B. GROWTH-INDUCING IMPACTS

Section 15126.2(d) of the CEQA Guidelines requires that an EIR analyze growth-inducing impacts of a project. Growth-inducing impacts are characteristics of a project that could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the area surrounding a project site. Impacts associated with the removal of obstacles to growth as well as the development of facilities that encourage and facilitate growth are considered to be growth-inducing. However, as stated in the CEQA Guidelines, it is not to be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

The proposed project would involve the development of spring water bottling facility and ancillary uses on the Cabin Bar Ranch south of the unincorporated town of Cartago, in Inyo County. The development of new spring water bottling facility would not cause a progression of growth beyond the project itself. The project site is located on a site that is served by current transportation, electricity, and telephone infrastructure, as well community service facilities (e.g., police, fire, schools, and libraries). The project's infrastructure improvements would consist of a new proposed internal driveway, a leach mound septic system, stormwater retention basin, a proposed 8.3-acre solar array, and the development of on-site wells. These infrastructure improvements would be designed with capacity to serve only the proposed project and would not provide additional infrastructure utility to off-site uses. Tie-ins to the existing utility main-lines already serving the project area.

The proposed project would generate 50 new jobs at the water bottling facility at full build-out. It is likely that some of the employees of the new facility would be residents already residing in local communities in Inyo County. However, even in the conservative event that all employees were to move to Inyo County to fill jobs for the proposed project, the addition of 50 new employees to the County would not constitute a substantial increase in the demand for the construction of new housing or infrastructure in the small number of communities within a reasonable commute distance from the site. Furthermore, any limited growth would not be substantial in the context of the growth forecasted for Inyo County. Housing and educational needs associated with 50 additional new jobs could be provided based on the commuting distance of the proposed plant to multiple communities, such as Ridgecrest, Lone Pine, and Independence.

Therefore, the proposed project would not induce substantial population growth in the area, either directly or indirectly, and would not eliminate impediments to growth. Therefore, the project would not foster growth inducing impacts.

C. EFFECTS FOUND NOT TO BE SIGNIFICANT

Section 15128 of the CEQA Guidelines states that an EIR shall contain a brief statement indicating reasons that various possible significant effects of a project were determined not to be significant and not discussed in detail in the Draft EIR. An Initial Study was prepared for the proposed project and is included in **Appendix A** of this Draft EIR. The Initial Study provides a detailed discussion of the potential environmental impact areas and the reasons that each topical area is or is not analyzed further in the Draft EIR. The County determined that the project would not result in potentially significant impacts related to Agricultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality (Floodplains, Seiche, Tsunamis, Mudflows), Noise (Groundborne Vibration, Airport Related Noise), Mineral Resources, Population and Housing, Public Services, Recreation, and Utilities and Service Systems). A summary of the basis for these conclusions is discussed below, and references cited in the Initial Study to support these conclusions are on file at the Inyo County Planning Department.

1. Agricultural and Forest Resources

Although the project site was previously utilized for cattle grazing, the proposed project site is not listed as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), and there is no "Farmland" in Inyo County, according to the definition of that term and the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Division of Land Resource Protection. Therefore, the proposed project would not convert areas designated as Farmland to a non-agricultural use. The proposed project is not in an existing Williamson Act contract area, as Inyo County does not participate in Williamson Act programs.[1]

Under existing conditions, the majority (407 acres) of the overall Cabin Bar Ranch is zoned Open Space, 40-acre minimum (OS-40) in the Inyo County Code. The remainder of the site (13 acres), where the 16 subdivided parcels are located, is zoned Rural Residential, 1-acre minimum (RR-1.0) in the Inyo County Code. Both the OS-40 and RR-1.0 zones permit agricultural uses of varying kinds; however, agricultural is not the only principle permitted use for these zones. The project would rezone an approximate 23.46-acre

[1] *The California Land Conservation (Williamson) Act, 2010 Status Report, California Department of Conservation, at page 2. http://www.consrv.ca.gov/dlrp/lca/stats_reports/Documents/2010%20Williamson%20Act%20Status%20Report.pdf, accessed May 2011.*

portion of Cabin Bar Ranch to the M-2 (Light Industrial) zoning designation. Similar to the OS-40 and RR-1.0 designations, the M-2 zone allows agricultural uses as a permitted use, although agricultural is also not the primary intended use for the M-2 zone. Therefore, the project's proposed zone change itself would not limit the ability of either the project site or the overall Cabin Bar Ranch to be used for agricultural uses.

The proposed project is not located within an area zoned as forest land, timberland, or timberland zoned Timberland Production. Additionally, the project site is currently zoned for open space and residential uses and is not used for forest services. Therefore, the proposed project would not conflict with existing zoning, or cause the rezoning of forest land, timberland, or timberland production land.

2. Geology and Soils

A Geotechnical Report, entitled *Geotechnical Investigation and Results of Percolation Testing: CG Roxanne Water Bottling Plant, Cartago, California* was previously prepared by Sierra Geotechnical Services, Inc., in January 2010 for the proposed project. The Geotechnical Report found that the eastern portion of an Alquist-Priolo Earthquake Fault Zone, positioned around the active Owens Valley Fault, crosses onto the western portion of the overall Cabin Bar Ranch. The eastern boundary of this Alquist-Priolo Earthquake Fault Zone is located approximately 0.27 mile west and southwest of the project site. The Owens Valley Fault, the subject fault that is located in the center of the above-described Alquist-Priolo Earthquake Fault Zone, is located approximately 0.32 mile southwest of the project site on the non-contiguous portion of the overall Cabin Bar Ranch west across US 395. While located on a portion of the Cabin Bar Ranch property, the Owens Valley Fault does not cross the project site and no known surface expressions of the fault are known to be located on the project site. As such, the Geotechnical Report indicates that impacts related to surface rupture of a known earthquake fault are not anticipated.

Like all sites in the vicinity of the Owens Valley Fault, the project site is located in a seismically active region, and development of the proposed project could expose occupants of the site to moderate to strong seismic ground shaking. This seismic ground shaking could damage proposed buildings, parking areas, and utility infrastructure. Several estimates have been made of recurrence intervals for earthquakes along this fault and it has been found that the fault has the potential to create an estimated Richter-Magnitude 6.5 to 8.2 earthquake every 2,000 to 3,000 years.[2] As mentioned above, no structures would be constructed within the portion of the Alquist-Priolo Earthquake Fault Zone that traverses the overall Cabin Bar Ranch.

Soil conditions at the project site are classified as a Site Class D, which corresponds to a "Stiff Soil" profile, as shown in the Geotechnical Report prepared for the proposed project.[3] While it is possible that future earthquakes produced in southern California, including those along the Owens Valley Fault, could shake the project site, modern, well-constructed buildings are designed to resist ground shaking through the use of shear panels and other forms of building reinforcement. As with any new development in the State of California, all structures built as part of the proposed project, would be constructed in conformance with CBC standards, as they pertain to earthquake hazards, and the Inyo County General Plan goals and policies for

[2] *Southern California Earthquake Data Center, Owens valley Fault Zone, http://www.data.scec.org/fault_index/owensval.html, accessed May 2011.*

[3] *Sierra Geotechnical Services, Inc., Geotechnical Investigation and Results of Percolation Testing, for CG Roxane Water Bottling Plant, Cartago, California, prepared by Mr. Joseph Adler and Mr. Thomas Platz, January 12, 2010,.*

seismic hazards.[4] The 2010 CBC incorporates the latest seismic design standards for structural loads and materials to provide for the latest in earthquake safety. Additionally, construction of the proposed project would be required to adhere to applicable recommendations provided in the Geotechnical Report. The Geotechnical Report implements recommendations, standards, and specifications to reduce impacts related to seismic-related hazards. Overall, given compliance with regulatory requirements and site-specific recommendations in the geotechnical report, impacts associated with seismic ground shaking would be less than significant.

With respect to liquefaction, the potential for liquefaction to occur in the area is high (approximately 60 percent probability), based upon the density of site soils relative to the depth of groundwater. In addition, the potential for ground failures associated with liquefaction (i.e., post liquefaction), reconsolidation and sand boils are also considered high.[5] As mentioned above, the proposed project would be designed and constructed in accordance with the 2010 CBC, as implemented by the Inyo County Code, which incorporates the latest seismic design standards for structural loads and materials to provide for the latest in earthquake safety, including the potential for liquefaction. In addition, to further ensure that the project is designed for the specific liquefaction conditions of the site, as mentioned above, a site-specific Geotechnical Report has been prepared for the proposed project. The Geotechnical Report implements recommendations, standards, and specifications to reduce impacts related to site-specific seismic-related ground failure, including liquefaction. These recommendations include those for proper foundation preparation and design, and dynamic settlement mitigation measures. With respect to expansive soils, based upon the Geotechnical Report prepared for the proposed project, there is a very low shrink/swell potential for the soils located on Cabin Bar Ranch.[6]

With respect to landslides, evidence of past landslides was not observed either during aerial photographic review or during site visits in the field. Due to the relatively flat topography of the site (i.e., three to four percent slopes in the western portion of the property, flattening out to one to two percent in the eastern portion of the property, adjacent to the Owens Dry Lake), the potential for seismically-induced bedrock landslides is non-existent.[7]

With respect for the project to result in soil erosion during construction and operation, the project would be constructed in accordance with a National Pollutant Discharge Elimination System (NPDES) General Construction Stormwater Permit. Since the area subject to ground-disturbing activities is greater than one acre, the NPDES Permit would include a site-specific Storm Water Pollution Prevention Program (SWPPP) that would be reviewed and approved by the Lahontan Regional Water Quality Control Board (LRWQCB) and implemented by the contractor during construction. The SWPPP would incorporate best-management practices (BMPs) in accordance with applicable regulations to control erosion and to protect the quality of surface water runoff during the project's construction period. Further, the project would secure a Section 401 Clean Water Certification from the LRWQCB. The NPDES General Construction Permit, Section 401 Clean Water Certification, and SWPPP would all be reviewed and approved by the LRWQCB prior to the start of

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4 *Inyo County General Plan, Public Safety Element, Geologic and Seismic Hazards.*

5 *Sierra Geotechnical Services, Inc., Geotechnical Investigation and Results of Percolation Testing, for CG Roxane Water Bottling Plant, Cartago, California, prepared by Mr. Joseph Adler and Mr. Thomas Platz, January 12, 2010, pages 8 and 9.*

6 *Ibid, at page 9.*

7 *Ibid.*

construction. Erosion during project operation would also be low due to the fact that areas not left in their current condition would be paved over, covered with other impervious surfaces, or landscaped with a native seed mix.

3. Hazards and Hazardous Materials

The project proposes a water bottling facility, and large quantities of hazardous materials are not normally used in the regular course of water bottling operations. Hazardous materials involved in the operation of the proposed project would be limited to janitorial, maintenance and repair activities, including commercial cleansers, lubricants, and paints. These types of materials are not considered acutely hazardous and would be used in limited quantities. All hazardous materials would be stored indoors on-site, and would not be exposed to the elements. They would be stored, handled and disposed of in accordance with manufacturers' recommendations, and County and State laws that protect public health and safety. In addition, the California Unified Program consolidates six state environmental programs into one program under the authority of a Certified Unified Program Agency (CUPA). These can be a county, city or JPA (Joint Powers Authority). The County Environmental Health Services Department is designated as a CUPA for all businesses and agencies using or storing hazardous materials and wastes. The CUPA regulates the hazardous materials used by a facility and ensures safe handling of all materials, including developing a response plan in the event of an emergency release of hazardous materials. Moreover, Material Safety Data Sheets (MSDS) are required to be kept on site at each facility for safety purposes for employees. Copies of the MSDSs are also included in the Business Plans filed with the CUPA. The proposed project would also include a propane tank to fuel the on-site fire suppression system. This tank would be installed and maintained in accordance with all applicable regulations, including those of Inyo County and Cal-Fire.

Approximately once every two to three months, a non-toxic cleaning agent would be applied to the bottling equipment as part of the regular cleaning activities. This cleaning agent would be non-toxic and would be limited to a quantity that would not create a significant hazard to the public if spilled or otherwise released into the environment in an unintended manner. Further, the cleanser would be treated and pH balanced prior to its discharge into the proposed stormwater retention basin located east of the project site.

Construction activities would be short-term and one-time in nature, and would involve the limited transport, storage, use, or disposal of hazardous materials. Some examples of hazardous materials handling include fueling and servicing construction equipment on site, and the transport of fuels, lubricating fluids, and solvents. These types of materials, however, are not acutely hazardous, and all storage, handling, and disposal of these materials are regulated by the Department of Toxic Substances Control, the U.S. EPA, the Occupational Safety & Health Administration, and the volunteer Olancha Community Services District.

Based on a review of the EnviroStor database, neither the project site nor the overall Cabin Bar Ranch are included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and would not create a significant hazard to the public or the environment.[8] Further, a Phase I Environmental Site Assessment (ESA) was prepared for the proposed project. This Phase I ESA included a records review to identify any reported current and historical environmental conditions (RECs, HRECs, and DMECs) and

[8] *California Department of Toxic Substances Control, "EnviroStor" Hazardous Waste and Substances Site List, http://www.envirostor.dtsc.ca.gov/public/, accessed May 2011.*

operating permits involving hazardous materials within an approximate minimum search distance of two miles of the project site. According to the Phase I ESA, there were no mappable or orphan sites within the minimum search distance from the site.[9] The site survey associated with the Phase I ESA did identify several De Minimus conditions within and adjacent to the project site. These include a former gas station approximately 0.5 mile north of the project site, the proximity of soda facility operations (including the soda ash pile), minor soil staining in the parking and miscellaneous storage areas adjacent to the metal barn, and potentially asbestos-containing materials in the two existing ranch houses and mobile home. However, as noted in their designation, these conditions are minor, do not represent recognized environmental conditions (RECs), and would not represent a hazardous condition with respect to proposed project.

The project is not located within the vicinity of a school or an airstrip. The nearest operating school is Lone Pine High School, which is located approximately 20 miles to the northwest of the project site. The nearest airport to the project site is the publicly owned, but privately operated, Lone Pine Airport, which is over 19 miles away. Further, neither project construction nor operation would impair implementation of, or interfere with, an adopted emergency response plan or evacuation plan, or restrict emergency vehicle traffic along US 395. In addition, the new bottling facility would include an emergency access road surrounding the perimeter of the facility and would comply with adopted emergency response and evacuation plans. Lastly, the project is located in a High Fire Hazard Severity Zone and would be designed with fire safety in mind. In accordance with Section 19.24.020 of the Inyo County Code, the project would be designed with a defensible fire zone in accordance with Cal-Fire standards for project site located in a State Responsibility Area (SRA).

4. Hydrology and Water Quality (Floodplains, Seiche, Tsunamis, Mudflows)

The proposed project is not located within a 100-year flood hazard area as mapped on a Federal Emergency Management Agency (FEMA) Flood Hazard Boundary of Flood Insurance Rate Map or other flood hazard delineation map. No housing is being considered as part of the proposed project. The proposed project area is designated as Zone C, which means that it is an area of minimal flood hazard and outside the 100- and 500-year flood level.[10]

The proposed project would not be impacted by seiche, tsunami or mudflow. There are no large bodies of water sitting at a higher elevation which could cause seiche conditions from seismic activity. The nearest body of water is Owens Dry Lake, which is mostly dry and only partially covered by shallow amounts of water supplied by LADWP for dust suppression purposes. It also sits at a lower elevation than the proposed project site and is, therefore, topographically incapable of creating a seiche which could impact the site. Finally, the project site is not subject to mudflows, as the site is surrounded by relatively flat land. The nearest source of a mudflow would be the eastern escarpment of the Sierra Nevada mountain range, the base of which lies approximately one mile west. The distance to the mountains and the terrain suggest low potential for a significant mudflow hazard in the area.

[9] *Sierra Geotechnical Services Inc., Phase I Environmental Site Assessment: Crystal Geyser Roxane Acquisition Parcels. March 8, 2010.*

[10] *Federal Emergency Management Agency, Map Service Center, FIRM Flood Insurance Rate Map, Inyo County California, Panel 1475 or 2700, Community Panel Number 060073 1475 C.*

5. Mineral Resources

The project site is not classified by the State of California as an area containing significant mineral deposits, nor is the site classified as an existing mineral resource extraction area by the State of California. [11] Historically, soda ash and bicarbonate processing began at the receding shoreline of Owens Dry Lake, in 1917, and large settling ponds for these lake minerals were very productive. However, over the years, Owens Dry Lake continued to dry and alkalinity rose too high for production to continue. In 1932, Inyo Chemical Company's soda ash and bicarbonate processing operations were permanently shut down. The remains of these operations are still clearly visible in the form of large, white spoils piles, at the northeastern border of Cabin Bar Ranch, immediately at the eastern edge of Cartago.[12] Today the only operator on the lake is the U.S. Borax plant located north of Cartago. Therefore, the chances of uncovering mineral resources during construction and grading would be minimal. Project implementation would not result in the loss of availability of a known mineral resource of value to the region and residents of the State, nor of a locally important mineral resource recovery site.

6. Noise (Groundborne Vibration, Airport Related Noise)

Construction of the proposed project would require the use of construction equipment during grading, excavation, hauling, establishing building foundations, installation of utility lines and services, and other construction activities. The use of this equipment could potentially cause groundborne vibration and noise. According to the Federal Transit Administration (FTA), ground vibrations from construction activities very rarely reach the level capable of damaging structures.[13] Additionally, groundborne vibration from construction activities typically diminishes quickly with distance to imperceptible levels (e.g., usually within 100 feet), and would not likely be felt at the single-family residential development approximately 300 feet north of the project site portion of Cabin Bar Ranch. In addition, post-construction on-site activities would be limited to a spring water bottling plant and truck operations that would not generate excessive groundborne noise or vibration.

The nearest airport to the project site is the publicly owned, but privately operated, Lone Pine Airport, which is over 19 miles away. Therefore, the proposed project is not located within an airport use plan or within two miles of a public or public use airport, and it would not expose people residing or working in the project area to excessive noise.

7. Population and Housing

Although the project proposes a new private internal access road, the proposed project would not require the addition, or the extension of public roads or other infrastructure. All improvements would be designed to serve only the project site, and would only have enough capacity to serve the proposed project. Therefore, these improvements would not indirectly induce residential growth.

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[11] *California Department of Conservation, Division of Mines and Geology/U.S. Geologic Survey, Minerals Yearbook: The Mineral Industry of California, 2001*

[12] *A Brief History of Owens Lake Mineral Production, by Walt Margeram. http://www.carsoncolorado.com/pages/mining.html, accessed April 2011.*

[13] *U.S. Department of Transportation, Federal Transit Administration, Transit Noise and Vibration Impact Assessment, 1995.*

Construction of the proposed project would create temporary construction-related jobs. However, the work requirements of most construction projects are highly specialized so that construction workers remain at a job site only for the time in which their specific skills are needed to complete a particular phase of the construction process. Thus, project-related construction workers would not be anticipated to relocate their household's place of residence as a consequence of working on the proposed project and, therefore, no new permanent residents would be generated during construction of the proposed project.

The proposed project would generate 50 jobs at the water bottling facility at full build-out. It is likely that some of the employees of the new facility would be residents already residing in local communities in Inyo County. However, even in the conservative event that all employees were to move to Inyo County to fill jobs for the proposed project, the addition of 50 new employees to the County would not constitute a substantial increase in the demand for housing in the small number of communities within a reasonable commute distance from the site. Housing and educational needs associated with 50 additional new jobs could be provided based on the commuting distance of the proposed plant to multiple communities, such as Ridgecrest, Lone Pine, and Independence. Furthermore, this growth would not be substantial in the context of the growth forecasted for Inyo County. Lastly, the proposed project does not propose the addition of any on-site housing and no occupyable housing structures would be demolished under the proposed project. The existing model home and on-site caretaker's residence would be retained.

8. Public Services

With respect to fire protection services, structural fire protection is provided by the volunteer Olancha Community Services District, with their fire station located at 689 Shop Street, in Olancha. Other fire stations in surrounding communities include the Lone Pine, Independence and Big Pine Fire Protection Districts, which supply mutual aid in times of need. For purposes of wildland fire prevention and suppression, the California Department of Forestry and Fire Protection and the US Bureau of Land Management (BLM) are the responsible agencies. The project site is located in a High Fire Hazard Severity Zone, as designated by Cal-Fire.[14] Nonetheless, the proposed project would be designed with fire safety in mind. In accordance with Section 19.24.020 of the Inyo County Code, the project would be designed with a defensible fire zone in accordance with Cal-Fire standards for project sites located within a State Responsibility Area (SRA). The proposed project would also be constructed with a designated comprehensive fire suppression system, with its own water tank and propane-fueled pump. These features would be placed in a separate building, approximately 300 square feet in size, that would be located east across the parking lot from the proposed Phase I buildings. The proposed bottling plant's sprinkler system would be attached to this water tank and propane-fueled pump. All fire suppression plans would be subject to County approval, and would be prepared in conformance with Inyo County guidelines and all other State regulations as required. The proposed project would implement all recommendations for fire prevention and protection made by Inyo County and the Olancha Community Services District, including but not limited to, safe circulation, ingress and egress, and sprinkler requirements, and water pressure requirements.

With respect to police protection services, the proposed project would be served by the Inyo County Sheriff's Department, which provides law enforcement services to all unincorporated areas of Inyo County, including Cartago. The proposed project would consist of light manufacturing uses, and no new residential or

[14] *Cal-Fire. Fire Hazard Severity Zones in the State Responsibility Area. Adopted November 7, 2007.*

commercial uses are being proposed. The proposed facility would employ security measures to reduce the potential for the proposed project to result in an increase in crime. For instance, the site would be surrounded by chain link fencing with a gated entrance. Additionally, exterior lighting would be provided in the loading dock area and at all building entrances. Security lighting would also be provided at the outside mechanical equipment pads. As such, the proposed project would not be expected to result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities in order to maintain acceptable service ratios, response times, or other performance objectives for police protection.

With respect to schools, to the extant that future employees relocate to Inyo County to work at the bottling pant, the number of school students from the project's 50 employees would not be substantial enough to require the construction of a new school, or the alteration of an existing facility, in order to accommodate these students. In addition, to the extent that the proposed bottling plant indirectly increases demand at schools serving the project vicinity, State law, including Government Code Section 65995 and Education Code Section 17620, requires payment of fees at a specified rate for the funding of improvements and expansion to school facilities. Such fees are paid at the issuance of building permits. In accordance with Senate Bill 50 (SB 50), enacted in 1998, the payment of this fee is deemed to provide full and complete mitigation for impacts to school facilities. As a result, the proposed project would not be expected to result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities in order to maintain performance objectives.

With respect to parks, the proposed project is a light manufacturing facility that would operate as a business in the community, employing up to 50 people at project buildout. It is anticipated that a majority of the employees of the facility would already be residing in the communities surrounding the project site, and would already be using these same parks and recreational facilities. To the extent that new employees would move to the project vicinity, their numbers would not be great enough to require the construction of new parks and recreation facilities, or require the expansion of existing facilities. Additionally, the proposed bottling facility would not increase tourism to Inyo County. As such, the proposed project would not be expected to result in substantial adverse physical impacts to the environment associated with the provision of new or physically altered existing parks.

Public services, such as transit services and libraries are currently in use by the same population base that would likely be employed at the water bottling facility. As the proposed project is not expected to result in a significant increase in residents, the project would not significantly increase the demand for public services.

The additional truck and vehicle trips to the project site would increase the traffic volume on US 395 in the vicinity of the project site, which may, in turn, reduce velocities along US 395 as vehicles and trucks decelerate to enter the project site and accelerate upon leaving the site. However, Caltrans is currently planning improvements to US 395. Nonetheless, even under existing conditions, as discussed in **Section 4.I**, *Transportation*, of this Draft EIR, the proposed project would not result in a significant impact on intersections or roadway segments along US 395. Furthermore, the project proposes a new access road that would connect to US 395. As the proposed project would occur prior to the start of the US 395 widening project, the proposed access road would be designed in accordance with Caltrans standards for the current US 395 configuration. To ensure that additional traffic and turning movements of the proposed project do not reduce the level of service along US 395 in the vicinity of the project site, the proposed project would

construct acceleration and deceleration lanes, and necessary turning lanes, at the proposed access point to the project site in accordance with Caltrans standards.

9. Recreation

As discussed above, the proposed project is a light manufacturing facility that would operate as a business in the community, employing up to 50 people at full buildout. As mentioned above, it is anticipated that a majority of the future employees of the proposed bottling facility would already be residing in the communities surrounding the project site, and would already be using Inyo County parks and facilities. To the extent that new employees would move to the project vicinity, their numbers would not be great enough to cause the substantial deterioration of recreational facilities. Additionally, the proposed bottling facility would not increase tourism to Inyo County. As such, implementation of the proposed project is not anticipated to cause an increase in the use of existing neighborhood and regional parks and other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Further, the proposed project would not include a recreational facility or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

10. Utilities and Service Systems

With respect to wastewater, the proposed project is not connected to a public sewer system as there is no central utility for sewer discharge servicing the project site or the neighboring community of Cartago. As such, any sanitary waste generated on the project site would need to be disposed of on-site. Domestic wastewater (e.g., kitchens, sinks, restrooms), disposal would incorporate a septic tank for the primary treatment of effluent and a leach mound for secondary treatment. Ultimate discharge from the leach mound system would be into the groundwater. The leach mound system would be designed to treat 750 gallons of wastewater per day and is an accepted method to provide secondary treatment of wastewater prior to contact with groundwater. It is similar to a sand filter; however, it is in a mound formation. Four soil profile holes and two percolation tests were conducted in the location of the proposed septic and leach mound system. The terminal percolation rate was measured at less than one minute per inch, and is thus, acceptable for the proposed septic and leach mound system. The leach mound system design would be reviewed and permitted by Inyo County Environmental Health Department and LRWQCB, which would ensure that impacts from the leach mound system would result in a less than significant impact with respect to water quality. It is important to note that all wastewater from the leach mound system would enter the groundwater and would not be discharged from the project site in stormwater or wastewater flows.

The proposed project would develop a water bottling facility on a largely undeveloped site, thus altering stormwater conditions on the project site. To manage any change in stormwater, the project proposes the construction of a stormwater retention basin to manage all stormwater flows on the project site, as well as the occasional management of treated rinsewater from cleaning operations at the project site. As discussed in **Section 4.G,** *Hydrogeology & Surface Hydrology*, the stormwater hydrology impacts of the proposed stormwater retention system would be less than significant.

With respect to water facilities, by its very nature, the proposed bottling facility would increase the withdrawal rate of groundwater within the immediate vicinity of the three production and one domestic well serving the proposed project. Upon project completion, the proposed project would be anticipated to have a

peak water demand of approximately 500 gpm from the on-site production wells during peak times (i.e., spring and summer) when all four bottling lines are operating simultaneously. During the non-peak times of the year (i.e., fall and winter), bottling would be rotated through the four bottling lines, so that not all four bottling lines would be operating simultaneously. When these two scenarios are averaged, at project buildout, the annual water demand is estimated to be 360 acre feet per year (afy) from the underlying Owens Valley Groundwater Basin. As discussed in **Section 4.G,** *Hydrogeology & Surface Hydrology*, the groundwater hydrology impacts of the proposed stormwater retention system would be less than significant.

Senate Bill 610 (SB 610) and Senate Bill 221 (SB 221), Sections 10910-10915 of the State Water Code, requires the preparation of a water supply assessment (WSA) demonstrating sufficient water supplies for any subdivision that involves the construction of more than 500 dwelling units, or the equivalent thereof. In Inyo County, a 500-unit residential project uses 560 acre feet of water per year.[15] Based on operating schedule (which would not operate all bottling lines continuously), this proposed project would result in a water demand of 360 acre feet per year - far less that the 560 calculated for a 500-lot residential project.

With respect to solid waste, the Lone Pine Landfill is available to provide solid waste disposal service to development in and around the community of Cartago. The Lone Pine Landfill has a permitted daily intake of 22 tons per day (tpd) with an estimated remaining capacity of 1,006,586 cubic yards and an estimated closure date of December 31, 2065.[16] Project construction would generate an estimated total of 518 tons of debris, or approximately three tpd.[17] The estimated three tpd generated during construction would constitute only a small percentage (13.6 percent) of the daily permitted intake of 22 tpd at the Lone Pine Landfill. As a result, project construction would be served by a landfill with sufficient capacity to accommodate the disposal needs of project construction. With respect to project operations, similar to the operations at the nearby Olancha Plant, the proposed project would implement a comprehensive recycling program to reduce the amount of solid waste from the project site that would be landfilled. The recycling program would include the sale of recyclable plastics and cardboard materials to private recycling companies. In 2010, the nearby Olancha bottling plant recycled approximately 150 tons of recyclable plastics and 145 tons of recyclable cardboard material. As a result of these efforts, the solid waste generated by the proposed project during plant operations would largely be composed of regular employee waste (e.g., restroom trashcans, employee break room waste). During plant operations, the proposed project would be anticipated to generate an estimated one tpd of solid waste that would need to be landfilled.[18] As mentioned

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[15] *Written correspondence from the Inyo County Planning Department, May 11, 2011. This quantity is based on the average per capita use of 470 gallons per day (gpd) and 2.2 people per residence, equating to approximately 1000 gpd or 1.12 acre feet per year.*

[16] *CalRecycle. Active Landfill Profile for Lone Pine Landfill (14-AA-0003). Available at: http://www.calrecycle.ca.gov/profiles/Facility/Landfill/LFProfile1.asp?COID=14&FACID=14-AA-0003. Accessed August 8, 2011.*

[17] *Environmental Protection Agency, Estimating 2003 Building-Related Construction and Demolition Materials Amounts, March 2009. Non-residential development has an average solid waste generation rate of 4.34 pounds per square foot of floor area. Since the project proposes 238,750 square feet of floor area, this equates to a total solid waste generation of 1,036,175 pounds (238,750 square feet x 4.34 pounds per square foot = 1,036,175 pounds), or approximately 518 tons, of solid waste over the construction period. Total construction duration for all three phases is estimated to be 8 months, or approximately 173 working days assuming a 5 day work week. Daily solid waste generation would thus be approximately 5,989 pounds per day (1,036,175 pounds ÷ 173 days = 5,989.45 pounds per day) or 3 tons (2.99) per day.*

[18] *CalRecycle. Estimated Solid Waste Generation Rates for Industrial Establishments, Light Manufacturing Category. Available at: http://www.calrecycle.ca.gov/wastechar/WasteGenRates/Industrial.htm. Accessed August 8, 2011. Light industrial land uses have an average solid waste generation rate of 41.64 pounds per employee per day. Since the project would have 50 employees, this equates to a total solid waste generation of 2,082 pounds per day (50 employees x 1.64 pounds per employee = 2,082 pounds), or approximately one ton of solid waste per day during plant operation.*

above, the Lone Pine Landfill has a permitted daily intake of 22 tpd, and therefore, the proposed project would constitute only 4.5 percent of the daily permitted intake at the Lone Pine Landfill. As with project construction, this estimate is conservative in that it does not take into account conservation efforts in accordance with AB 939. As mentioned above, CGR would implement a comprehensive solid waste recycling program that would recycle far greater than 50 percent of the solid waste generated as part of plant operations. In addition, in accordance with AB 939 requirements, the proposed project would also introduce methods of recycling common employee waste, such as separate recycling waste bins. These efforts would further reduce the quantity of solid waste that would be disposed of at the Lone Pine Landfill. This analysis is also conservative in that it assumes that the Lone Pine Landfill is the only option to accept solid waste from the proposed project. While this would be the likely disposal facility to accept operational waste from the proposed project due to its close proximity and large remaining capacity, there are three other landfills in Inyo County that could accept solid waste if the Lone Pine Landfill were to reach its daily permitted intake. As a result, the proposed project would be served by a landfill with adequate capacity to serve the operations of the proposed project.

Electrical transmission to the project site is provided and maintained by LADWP. The proposed project would consume approximately 24.176 megawatt hour (MWh) of electricity annually. Upon completion, the proposed on-site solar array would be anticipated to generate an estimated 1.813 MWh of electricity annually, or 7.5 percent of the project's total projected electricity needs. As a result, the proposed project would require 22.363 MWh of electricity annually from LADWP. In 2010, LADWP customers consumed an estimated 25,326,000 MWh of electricity.[19] Although current projections do not extend to extend to 2025, the year of project buildout, by 2020, the electricity consumption for LADWP customers is projected to increase to approximately 27,943,000 MWh. Thus, the projected 2010–2020 increase in the electrical consumption by LADWP customers would total approximately 2,617,000 MWh. Accordingly, the project-related net increase in electricity demand would represent less than 0.01 percent of LADWP's forecasted growth in electricity consumption. As a result, the project is within the anticipated electrical service capabilities of LADWP.

D. SIGNIFICANT UNAVOIDABLE IMPACTS

Section 15126.2(b) of the CEQA Guidelines requires an EIR to describe significant environmental impacts that cannot be avoided and impacts that can be mitigated but not reduced to a less than significant level. As further described in **Section 4.0,** *Environmental Impact Analysis*, of this Draft EIR, with implementation of regulatory requirements, project features, and mitigation measures, impacts associated with air quality (construction), biological resources, archaeological/paleontological resources, historical resources, hydrogeology & and surface hydrology, and noise (construction) can be mitigated to a less than significant level. No significant and unavoidable impacts associated with the proposed project were identified.

[19] *California Energy Commission, California Energy Demand 2010 - 2020 Commission-Adopted Forecast, December 2009. Available at: http://www.energy.ca.gov/2009publications/CEC-200-2009-012/index.html. Accessed March 22, 2010.*

E. REASONS WHY THE PROJECT IS BEING PROPOSED, NOTWITHSTANDING SIGNIFICANT UNAVOIDABLE IMPACTS

Section 15126.2(b) also requires a description of the reasons why the project is being proposed, notwithstanding significant unavoidable impacts associated with the project. As described above, no significant unavoidable impacts associated with the project were identified.

F. POTENTIAL SECONDARY EFFECTS

Section 15126.4(a)(1)(D) of the CEQA Guidelines requires mitigation measures to be discussed in less detail than the significant effects of the proposed Project if the mitigation measure(s) cause one or more significant effects in addition to those that would be caused by the proposed project. In accordance with the CEQA Guidelines, proposed project mitigation measures that could cause potential impacts were evaluated. The following provides a discussion of the potential secondary effects that could occur as a result of implementing project mitigation measures.

1. Aesthetics

Project impacts related to scenic vistas, the visual character of the project site and surrounding vicinity, and light and glare would be less than significant and no mitigation measures are required. Therefore, no adverse secondary impacts would occur.

2. Air Quality

Mitigation measures AQ-1 through AQ-6 are required to comply with the Great Basin Unified Air Pollution Control District (GBUAPCD) Rule 401 and 402 to control fugitive dust emissions. These mitigation measures include watering active portions of the construction site; limiting on-site vehicle speed to 15 miles per hour; paving or watering all on-site roads; watering excavated or graded material; and limiting construction activity during periods of high winds or Stage 1 or Stage 2 smog episodes; and watering or covering all material transported off-site. Although consumption of water for dust suppression could occur under Mitigation Measures AQ-1, AQ-3, AQ-4, AQ-5, and AQ-6, the amount would be negligible and was considered in the evaluation of the project's water consumption in Section 4.G. Overall, these mitigation measures would reduce short-term fugitive dust emissions on nearby sensitive receptors and therefore would not result in adverse secondary impacts.

Project operational air quality impacts would be less than significant and no mitigation measures are required. Therefore, no adverse secondary impacts would occur.

3. Global Climate Change

Project-level global climate change impacts would be less than significant and no mitigation measures are required. Therefore, no adverse secondary impacts would occur.

4. Biological Resources

Mitigation measure BIO-1a requires that impacts to sensitive plant species be avoided or minimized to the maximum extent practicable, should focused surveys determine the presence of sensitive plant species. If impacts cannot be avoided, then mitigation shall include the preparation of a Species Mitigation and Monitoring Plan (SMMP) and either restoration at an off-site location, payment into an agency-approved off-site mitigation bank, or off-site purchase and set aside of land.

Mitigation measure BIO-1b requires that impacts to sensitive wildlife species be avoided or minimized to the maximum extent practicable, should focused surveys determine the presence of sensitive wildlife species. If impacts cannot be avoided than mitigation shall include such measures as on- or off-site habitat creation and/or restoration, payment into an agency-approved off-site mitigation bank or in-lieu fee agreement, off-site purchase and set aside of land with suitable habitat, donation of an off-site pond, off-site relocation, or a monitoring and mitigation plan depending on the impacted species.

Mitigation measure BIO-2 requires the preparation of a mitigation and monitoring plan to off-set impacts to the red willow thicket sensitive plant community through on- or off-site replacement, restoration, or enhancement.

Mitigation measure BIO-3 requires compliance with regulations governing impacts to jurisdictional features and requires on- and off-site replacement of Army Corps of Engineers/Regional Water Quality Control Board jurisdictional "waters of the U.S/waters of the State" and California Department of Fish and Game jurisdictional streambed and riparian habitat that would be directly impacted by removal as a result of the project. Mitigation Measure BIO-4 requires implementation of a Riparian and Wetland Monitoring and Adaptive Management Program for these resources where they may be indirectly impacted as the result of lowered groundwater levels due to project-related pumping.

Mitigation measure BIO-5 requires compliance with regulations governing nesting birds, such as scheduling vegetation removal activities outside the nesting season and/or conducting a survey for the presence of nests and providing a buffer around active nests.

These mitigation measures would reduce potential impacts on sensitive plant species, sensitive wildlife species, sensitive plant communities, jurisdictional features, and nesting birds. Since off-site restoration or replacement areas would require additional agency review and approval and would result in the overall enhancement of biological resources, these measures would not result in adverse secondary impacts.

5. Archaeological/Paleontological Resources

Mitigation measures ARCH-1a, ARCH-1b, and ARCH-1c address the potential for the unexpected discovery of archaeological resources on the project site during grading and excavation. The measures require retaining a qualified archaeological monitor who shall be present during construction excavations, developing an appropriate treatment plan in the event that archaeological resources are unearthed, and preparing a final report at the conclusion of archaeological monitoring. Mitigation measure ARCH-2a addresses the potential for discovery of human remains during grading and excavation, and is intended to ensure compliance with CEQA Guidelines, State Health and Safety Code, and Public Resources Code for the appropriate disposition of such remains.

Mitigation measures ARCH-3a, ARCH-3b, and ARCH-3c address the potential for the unexpected discovery of paleontological resources on the project site during grading and excavation. The measures require the attendance of a pre-grading/excavation meeting by a qualified paleontologist if construction excavations will reach depths of five feet or greater, developing a paleontological monitoring program, monitoring as needed during construction, temporarily diverting or redirecting construction activities to allow for recovery and disposition of any fossil remains, appropriate treatment and disposition of any fossils collected, and preparing a final report at the conclusion of monitoring.

These measures would reduce potential impacts on archaeological resources (including human remains) and paleontological resources and would not result in adverse secondary impacts.

6. Historical Resources

Mitigation measure HIST-1 requires retaining a qualified architectural historian or historical archaeologist to conduct construction monitoring during demolition of Residence 2, to ensure that important information about Residence 2 would be recovered, recorded, interpreted and developed, and filed in an appropriate public archive for future use. Mitigation measures HIST-2, HIST-3, HIST-4, and HIST-5 address the potential for archaeological artifacts to be encountered during excavation and ensure appropriate monitoring and treatment by retaining a qualified archaeological monitor for ground disturbing activities; developing an appropriate treatment plan in the event that historic period archaeological resources are unearthed; preparing a final report at the conclusion of archaeological monitoring; and disposing of human remains. These measures would reduce potential impacts on historical resources and would not result in adverse secondary impacts.

7. Land Use and Planning

Project impacts related to land use regulations guiding development on the project site and compatibility with existing land uses would be less than significant and no mitigation measures are required. Therefore, no adverse secondary impacts would occur.

8. Hydrogeology and Surface Hydrology

Although the Project is not anticipated to result in significant impacts related to groundwater or surface water hydrology, the following recommendations provided in the *Hydrogeologic Evaluation* prepared for the proposed project are incorporated as mitigation measures. Mitigation measure HYDRO-1 requires the utilization of all three wells to mitigate water level drawdown impacts in the vicinity of any one pumping well and water-level monitoring to evaluate the actual effect of pumping on water levels. Mitigation measures HYDRO-2 and HYDRO-3 requires a regular program of data collection and database maintenance and evaluation of data by a qualified groundwater professional to identify changes in groundwater conditions over time and modify the proposed pumping program accordingly. These mitigation measures are intended to minimize less than significant impacts on groundwater recharge, groundwater quality, and off-site wells and therefore would not result in adverse secondary impacts.

9. Noise

Mitigation measures NOISE-1 and NOISE-2 identify project procedures to be followed during construction, such as equipping noise-generating equipment with noise control devices, maintaining equipment to assure that no additional noise is generated, and providing a temporary noise barrier. These mitigation measures are intended to reduce construction noise impacts on nearby residential uses and therefore would not result in adverse secondary impacts.

Project operational noise impacts would be less than significant and no mitigation measures are required. Therefore, no adverse secondary impacts would occur.

10. Transportation

Project impacts related to roadways and intersections and traffic safety would be less than significant and no mitigation measures are required. Therefore, no adverse secondary impacts would occur.

7.0 EIR PREPARERS

A. DOCUMENT PREPARATION

1. Lead Agency

County of Inyo
Planning Department
68 North Edwards Street
Independence, CA 93526
(760) 878-0263

- Josh Hart, Planning Director
- Tanda Gretz, Senior Planner

2. EIR Preparation

PCR Services Corporation
80 South Lake Avenue
Pasadena, California 91101
(626) 204-6170

- Jay Ziff, Principal/Director of Environmental Planning and Documentation
- Anne Doehne, Associate Principal
- Christine Abraham, Principal Planner
- Shawn Gaver, Senior Planner
- Margaret Shekell, Senior Planner

Air Quality Staff
- Heidi Rous, Principal, Director of Air Quality
- Alan Sako, Senior Air Quality Engineer
- Everest Yan, Engineer
- Vivian Liao, Associate Air Quality Engineer

Acoustics Staff
- Kyle Kim, Acoustical Engineer

Biological Resources Staff
- Steve Nelson, Senior Vice President / Director of Biological & Regulatory Services
- Amir Morales, Principal Regulatory/Environmental Scientist
- Stephanie Gasca, Senior Regulatory Specialist II
- Maile Tanaka, Senior Biologist
- Bob Huttar, Biologist
- Zeke Cooley, Biologist

Cultural Resources Management Staff
- Margarita Wuellner, Principal Architectural Historian/Director of Historic Resources
- Amanda Kainer, M.S., Architectural Historian

- Kyle Garcia, Senior Archaeologist
- Matthew Gonzalez, Associate Archaeologist/Paleontologist

Graphics

- Greg Spalek, Director of Graphic and Technology Services
- Denise Kaneshiro, Senior Graphic Designer

Publications

- Terry Keelan, Publications Director

3. Technical Consultants

Richard C. Slade & Associates, LLC
Richard C. Slade, Principal Groundwater Geologist
Earl F. LaPensee, Senior Groundwater Geologist
12750 Ventura Blvd., Ste. 202
Studio City, CA 91604

Geosyntec Consultants, Inc.
Jeffery Zukin, P.G., C.E.G., Senior Geologist
924 Anacapa Street
Suite 4A
Santa Barbara, CA 93101

LSC Transportation Consultants, Inc.
Sara T. Hawley, PE, Senior Engineer
2690 Lake Forest Rd. / PO Box 5875
Tahoe City, California 96145

Triad Homes Associates (tha), Civil Engineering and Land Surveying
Tom Platz, P.E. C 41039
549 Old Mammoth Road
Suite 202
Mammoth Lakes, CA 93546

4. Project Applicant

Crystal Geyser Roxane, LLC
Rick Moore, Chief Operating Officer
Shasta Plant
1400 Mary's Drive
Weed, CA 96094

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PCR Pasadena
80 South Lake Avenue
Suite 570
Pasadena, California 91101
TEL 626.204.6170
FAX 626.204.6171

PCR Santa Monica
233 Wilshire Boulevard
Suite 130
Santa Monica, California 90401
TEL 310.451.4488
FAX 310.451.5279

PCR Irvine
One Venture
Suite 150
Irvine, California 92618
TEL 949.753.7001
FAX 949.753.7002

PCRinfo@pcrnet.com